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ABSTRACT

The role of nontraditional study in the liberal arts college was examined at the conference sponsored by the East Central College Consortium. Highlights of the proceedings included: "A Brief Overview of the Syracuse Adult Degree Program," by Marvin Druger; the keynote address by Harold L. Hodgkinson of the National Institute of Education; a science workshop conducted by Marvin Druger; and talks by John A. Valentine on "If I Had College Teaching to Do Over" and by Mari Jeanne Egan on "A Personalized Account of the Adult Learner." (LBH)

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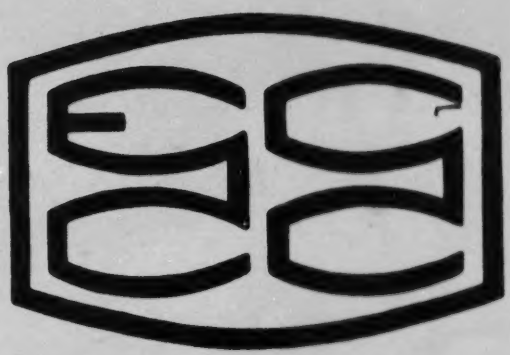

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SECOND ANNUAL CONFERENCE ON NON-TRADITIONAL STUDY

AND THE LIBERAL ARTS COLLEGE.....BETHANY, WEST VIRGINIA..... NOVEMBER 14-15, 1975

SECOND ANNUAL CONFERENCE FOR

E.C.C.C.C. FACULTY AND ADMINSTRATORS

NON-TRADITIONAL STUDY AND THE LIBERAL ARTS COLLEGE

Bethany College
Millsop Leadership Center and Gresham House
Bethany, West Virginia

November 14 - 15, 1975

Sponsored by

THE EAST CENTRAL COLLEGE CONSORTIUM
NON-TRADITIONAL STUDY PROGRAM
MOUNT UNION COLLEGE
ALLIANCE, OHIO 44601

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*Remarks contained in these conference proceedings were not intended to be formal papers submitted for publication. Contents were compiled from tapes or notes of Conference sessions.

CONFERENCE SCHEDULE

Friday Evening:

5:00	- 6:30	Registration
6:00	- 7:00	Social hour
7:00		Dinner at Benedum Commons
8:30		"Brief Overview of the Syracuse Adult Degree Program," Dr. Marvin Druger
9:30		Keynote Address by Dr. Harold Hodgkinson, Director, National Institute of Education

Saturday Morning:

7:00	- 8:30	Breakfast
9:00	- 12:00	Science workshop, Dr. Marvin Druger, Syracuse University
9:00	- 10:15	"If I Had College Teaching to Do Over," John Valentine, College Entrance Examination Board
10:15	- 10:45	Coffee
10:45	- 12:00	"A Personalized Account of the Adult Learner," Mari Jeanne Egan, Ohio State University
12:30		Lunch at Benedum Commons

A BRIEF OVERVIEW OF THE SYRACUSE ADULT DEGREE PROGRAM

Marvin Druger
Professor of Biology and Science Education, Syracuse University

Dr. Marvin Druger has taught biology courses in the Syracuse Independent Study Degree Program for several years. Besides helping to shape non-traditional science courses for use in the Syracuse program, Dr. Druger has also been involved in the development of biology programs for secondary schools.

A BRIEF OVERVIEW OF THE SYRACUSE ADULT DEGREE PROGRAM

Marvin Druger
Professor of Biology and Science Education, Syracuse University

Syracuse University's Independent Study Degree Program was started with a $50,000. grant from the Mellon Foundation. The program officially began in 1966, with 43 students working toward a B.A. in Liberal Studies. In the ISDP, the student was required to remain on campus for three weeks in June. During this period the student would receive course assignments. The student would then complete the assignments on his own time and return to the University the next year, in June, for another three week residency period. Although Syracuse's ISDP was gaining approximately 50 new students per year, the number of incompletes were too great to warrant continuation of this particular system.

Hence, in May of 1974, a new system was initiated. The new system consists of tri-mesters from May-August, August-January, and January-May. An eight day residence period is required for each tri-mester. Five hundred and twenty-five students are enrolled per year; approximately 135 students per tri-mester with more students finishing courses or completing degrees. Limited credit is given for prior-experience, but Syracuse does accept CLEP.

The first system in which the time span was elongated was detrimental to the ISDP. The tri-mester better meets the needs of the adult student by allowing the student to take a tri-mester off without falling far behind in the program.

Strategy in dealing with the adult learner is very im-

portant. We have found that once a student starts the program he usually finishes, but a student who never starts never finishes. We give the student an easy first assignment and have him send it in soon afterward. Also a new student is only allowed to take three courses per tri-mester.

The adult student is more apt to seek out his professor for conferences and more apt to question his professor's information. The quality of the work produced by adult students is excellent!

KEYNOTE ADDRESS

Harold L. Hodgkinson
Director, National Institute of Education

Harold L. Hodgkinson was sworn in as director of the National Institute of Education in May, 1975. He has a reputation as one of the most knowledgeable research authorities in higher education. Formerly on the staff of Berkeley's Center for Research and Development in Higher Education, Hodgkinson served as dean of Bard College in New York State until 1968. Last year he was president of the American Association for Higher Education. He has given much of his time to the development of evaluation tools for non-traditional education. Hodgkinson was a campus consultant on innovative programs and has written extensively on the subject.

KEYNOTE ADDRESS

Harold L. Hodgkinson
Director, National Institute of Education

Among the things I would like to do, first is to try to explain a little about why we are so interested in open learning, particularly adult open learning. I also would like to discuss some of the reasons why Americans have lost some faith in higher education; some of the things that we have done to renew that faith; and some new options we should consider.

First of all, why are we so interested in adults? We are running out of young people. It is amazing to me, the amount of moral and ethical dedication to educating adults that has swept America over the last five or six years.

As shown in Figure 1, we are still on a light increase in terms of the number of people in the 18 to 21-year-old category, but in 1980 those numbers begin to go down, and they go down in rather a sharp fashion.

We are literally running out of young people. You have been told that before, but here is something that I don't think you have been told. If you look at where the decrease is coming, as designated in Figure 2, you will find that, in terms of the total birtn populaion in 1960-72, it is primarily the caucasian birth rate that has shown that decline. In this particular case, for example, most of the total decline comes from the caucasian sector, but if you look at minorities births from 1960-72, the line remains remarkably straight. That means that there is a higher percentage of the births in 1972 among minority groups - 20 percent compared to 15 per cent, in 1960. The numbers have not

changed, but the proportion of births in minority groups has gone up significantly.

Illustrating the situation is Figure 3, taken from a book called Social Indicators 1973, produced by the Office of Management. It illustrates the situation vividly, showing a downhill roller coaster line representing the number of 18-year-olds who are white, and a steady, only slightly declining line, representing the number of 18-year-olds who are black. The percentage of 18-year-olds who are black goes to 12 per cent in 1965, to 18 per cent by 1985. If you add all the minority groups in the 1985 data, it does look as if the 18-year-old cohorts by that time will be something like 30 per cent from minority faction. That is a terribly important thing when you think about the job of educating a conventional student. There must be 500 small colleges in this country that think to themselves "Well, okay, that may be interesting nationally, but there will always be 400 freshmen who want our kind of college." By "our kind of college," they really mean a college which manifests a caucasian, middle-class protestant value system. It may not be true.

The study also suggests that those of us who think that we can wait out the question of racial minorities, or the question of lower socio-economic status background, and then, sometime in the future, it will go away, are kidding ourselves.

In addition to having a declining number of 18-year-olds, we have a higher percentage of those people who come from backgrounds which don't work terribly well in conventional education settings. In addition, we have the problem you always seem to have in rising expectations. This is a thing that has been talked to death, but I will just give you one little example.

Looking at Figure 4, it is quite clear that minorities

have made considerable progress in raising their annual income from 1947 to 1971. But during the same time span, white people's median annual income also has raised so the line remains remarkably parallel, which does tend to suggest that there is a terrible problem in terms of catching up. This has a great deal to do with the number of people who come from a minority group backgound who feel that college is the way to catch up. I discover a considerable sophistication among young people who come from minority backgrounds when they know that there are many ways of making a good living besides doing something that requires going to college. I am very worried about that, particularly because it might mean that in the future the decline in the numbers of minorities background going into higher education may go down instead of up. At the moment we are doing fairly well on that, but I think in the future it will be more difficult.

As you know, a smaller percentage of the high school graduating class goes directly on to further education now, compared to a period when almost 50 per cent of the high school graduates went on to some form of further education. The college ratio for recent high school graduates, is now running about 35-36 per cent. That is something to worry about. Compounding the problem of a declining number of 18-year-olds, and increasing cohorts from that group who come from minority group backgrounds, and lower SES backgrounds, a declining percentage of 18-year-olds is going directly on to some form of further education. It has led us to a new kind of concern - the egalitarian tendency, in contrast to the 1860-1910 aristocratic era, when one per cent of the birth of cohorts ended up in college or a university. College and university didn't matter too much during that period because such a small percentage went and they went because of birth. There was no need for an SAT at the small colleges that were existence in 1860's, because nobody would have known what to do about them anyway.

We moved from the aristocratic era to the meritocratic era. This was a period when large numbers of young people sought admission to college, particularly through the GI bill, but also through many other forms. We had to develop an easily scored and relatively reliable way of keeping some of them out. There simply weren't enough places during those years to admit everybody who wanted to go to college. Our colleges had an enormous building program - very much like those of the real estate developers in the suburbs, trying to get new places put up so that all those people who wanted education could get it. But, meanwhile, we developed a series of tests called aptitude tests. All of the testing was primarily for admission, not for graduation. American society still trusted what we said a B.A. meant and was willing to take our word that if anybody sat on his seat for four years, he probably learned something. Testing at graduation was not a big issue at this period. It was testing for admission. During that period it was the view of higher education, and probably American society, that to select a meritocracy that would run the country was the job of higher education. From there we go to the egalitarian tendency, probably because of the declining number of people seeking higher education.

A greater belief in educating everybody to their own limits and a funny kind of demystification is going on now that Max Vapor talked about a long time ago. People don't like jargon; they don't like to be told by lawyers, "Buddy, you can't possibly understand this but give me $500 and I'll make sure that you get a legal divorce." That kind of thing doesn't go down very well. Now you can walk into any stationery store in the United States and buy a perfectly legal loan form if you want to loan somebody some money. Fifteen years ago, you couldn't do that. You had to go to a lawyer and pay $50. Now you can buy that "knowledge" at a stationery store.

There are about 400 books now in circulation which suggest that if you don't like what your doctor tells you you've got, maybe you can find a better solution or diagnosis, or maybe, if you'd eat some kind of strange food, you'd get better. There is a great tendency to demystify the professions, and I don't think that we have taken that seriously enough in education. When I got my courtesy calls in relation to NIE, first thing that people said to me was, "For heavens sake, don't use those big words on me or on my colleagues in Congress." I tried very hard to use nothing more than two or three-syllable words, and you can actually say some things that are reasonably intelligent using two and three-syllable words.

Notice that the egalitarian era was a time when, because of the courts' affirmative action, we were beginning to change our testing procedures. We are not so much interested in "who gets in" as we are interested in the quality of education of "who gets out." What does it mean to have a college degree? The whole question of testing is a clue as to where our values have shifted, and they have shifted from admission, which meant rejecting people, to the final moment of graduation, when we want to know what people can do when they leave with a degree or a credential. That means, of course, the shift in attitude opened up the whole possibility of getting the degree or credential without going through the exercise of sitting in a classroom for 124 credit hours. I would contend that could not have taken place unless we had moved for this kind of egality. Otherwise, we would still be saying, "You have to sit in class for 124 hours or you're not meritorious."

So one of the things that led to the whole open learning movement is the notion of egalitarianism and all the things that it meant, and the fact that we moved our testing procedures from entry testing in the beginning to proficiency

testing in the end. In other words, "What can you really do? What are you competent at? If you are competent at it, and you can demonstrate it, and you did go to school, great; we will give you the credential anyway."

It is important to realize that we have also said, "Some people who are coming into our colleges and universities are not well-trained and don't have the background, so we will follow open door colleges or community colleges. They can take care of those people so that if the minority cohorts continue to go up and if their social class continues to go up, we will simply send them to the open door policy because you can just walk in through the door and go to class."

But that just isn't true. As least in the study I'm discussing, which is pretty good. Done in 1973, it is a small sample with relative reliability. You find that an awful lot of community colleges have placed restrictions on who can come in. Eighty-six per cent want a high school diploma, 27 per cent have a minimum age requirement, 8.8 per cent require test scores, 41 per cent require a physical exam (That may not sound much to you, but a physical exam costs a certain amount of money and community colleges are not willing to pay it). Thirty-four per cent want a high school diploma or certificate, 5 per cent have a minimum age characteristic and 55 per cent have some combination.

Also, as shown in Figure 7, only 46 per cent of the community colleges had developmental or preparatory remedial programs. Less than half were prepared, in a programatic sense, to deal with the new student who is inadequate. The facts lead us to the conclusion that we can't rely on the two-year colleges to do the whole job for us, at least in their present state.

One thing we have to remember is the fact that Americans

have changed their faith, not only in us, but in a large variety of social institutions. If you look at faith in the leadership of major business corporations, as shown in Figure 8, it dropped from 55 to 27 per cent between 1967 and 1972. Other declines in faith over the same time span included: bank and other financial institutions, 67 to 37 per cent; Congress, 41 to 19 per cent; the chief executive, 41 to 23 per cent; the scientific community, 56 to 32 per cent; and even medical doctors, 73 to 61 per cent.

Figure 9 gives us an expanded view of the low level of confidence in American institutions. It isn't just higher education that people are angry at. Sometimes we get paranoid because we think that America lost faith in us. The fact is that all of America's social institutions are, right now, in a period of enormous strain because of the fact that there is a decline in the faith of the people regarding their ethics and their ability to do certain kinds of things. It reminds me of a tombstone in Laramie, Wyoming, which carries the inscription, "See, I told you I was sick." I hear a lot of academics saying that every year, and this is kind of an indication from the other side of the grave that it would be a good idea to pursue our problem.

Let's look at a few of the genuine gripes that Americans have about the higher education system as it now exists. First, our major premise, which is "Come to us and we will make you rich." If you look at income data in Figure 10 (This is for 1969; income data for some reason takes four years to get together), comparing people with four years of high school and those with four years of college, you do find that college graduates made more money but in the 60 per cent range you cannot tell from the level of income how many years of education a person has had. If you subtract doctors and lawyers from this group, it virtually removes the advantage.

It is important to realize that the person who goes to college still makes more money, but the amount of increase is less than it used to be. Figure 11 shows that in 1970 high school graduates were making about $8,000 per year, and in 1972 they were making $9,500, reflecting an increase of $1,000. During the same period, college graduates went from $11,100 to $11,500, for a grand total of $400 increase. College graduates still make more than people who have high school diplomas, but think of the life style in 1972 that you could carry on for $11,100 compared to the life style you could carry on for $11,500. Let's discuss some data, not yet published, which is an attempt to correlate lifetime earnings based on two factors: one is years of higher education, and the other is whether or not you join a labor union. The data thus far is overwhelming in support of the notion that if you want higher earnings over one lifetime, the best thing you can do is to join a labor union as quickly as possible. That is something to think about and while all of the data still has some problems it is something with which to concern ourselves. This trend is not necessarily bad, but it must be recognized. Street cleaners in San Francisco, for example, make $13,000 a year while assistant professors in the state college system make $11,000. Look what street cleaners do. They do a very important job nobody else wants to do. As Clark Cristed once said, it may be wise to get used to paying people a lot of money to do disagreeable jobs that have to get done, and that we don't want to do. That is a painful thing to think about, but it is also kind of interesting. All you have to do is compare a teachers' strike with the garbage collectors' strike, and I think the point is clear.

One of the things that has made life more difficult for us is the fact that the courts have been telling us what to do. Up until 1968 there were virtually no court decisions having any direct impact on how we conducted post-secondary

education. Then came a whole bunch, among them Griggs vs. Duke Power, which I considered a landmark decision. In that particular decision, the Supreme Court said that what Congress has forbidden is giving these devices and mechanisms (that includes both degrees and tests) controlling force unless they are demonstratively a reasonable measure of job performance. In other words, Griggs, who had been denied a job by the new power company because he could not pass a certain kind of test, which was a personality inventory, and did not have the proper educational credential, could not be denied access to that job unless it was shown that only the people who had that degree could pass the personality inventory test and could do the job. Because nobody could do that, Griggs won.

There are a lot of questions that the Griggs case raises which we haven't taken too seriously. But we ought to. Are you proud of the fact that at your institution you have to have the Ph.D. degree in order to get tenure? If you are, can you demonstrate that the people who have tenure are better teachers - or that they do a better job at whatever you want your teaching faculty to do than those who don't have Ph.D.'s? That is pretty tough demonstration to make. But if you deny some person tenure on the ground that he or she does not have a Ph.D., you may find yourself in a Griggs vs. Duke Power case. Because that person might well take you to court on the grounds that nobody can establish the fact that a Ph.D. indicates better teaching or better quality in terms of any other dimension of university performance. That doesn't necessarily happen, but you have to raise the question. Because Griggs raises all these questions about the importance of educational degrees and credentials as ways of people keeping people out of the job market. That seems to me to be terribly important.

We also have to raise some questions about using the SAT

for admissions. Is that legal under terms of Griggs vs. Duke Power? So far as I know, an academic parallel to that case has never come up. However, we do have the Peter Doe case in the West. Peter Doe, as you know, graduated from high school in California and was functionally illiterate. He sued the state for over $1 million on the grounds that he got a credential that was absolutely meaningless. I think we are going to see a lot more cases regarding consumer issues, in which the students are saying, "Look, this degree doesn't mean anything, and yet I paid a lot for it." The first such case I can recall was in 1968, in which a student graduated from Columbia University in June, and in July he received a bill for two semesters' back tuition which he hadn't paid yet. And in August, he turned around and sued the institution for breech of contract. In the hearing, he brought in a catalog of the University and read from page 8 (and as you know, any college or university catalog on page 8 has a statement that reads something as follows: "Graduates of this institution are knowledgeable, aware, trustworthy young men and women who are thoroughly familiar with and ready to assume their obligations as adults in American society.") He then produced his bill for two semesters back tuition and argued, "This is proof that I am not a responsible member of society because I owe $14,000 in tuition debt." That is a funny case, except that there are 32 such cases now pending in state and federal courts. Our catalogs cannot speak with forked tongue.

The preceding cases, and others like them, raise a whole bunch of questions, and lead us back to our original concern with aptitude testing. We tested because we thought aptitude tests predicted grades. Well, they do, pretty well. They don't get all the variances, but they get a considerable amount. There is another question that we now must start asking, and that is, where the open learning thing is so important, what do grades predict?

David McClennan, past president of the American Psychological Association and professor at Harvard, looked at all of the studies in which people have tried to correlate grades in college with success in later life, using 14 different criteria for success, some of which were income, philanthropic contributions, interest in community affairs, and interest in the arts. Researchers had great difficulty demonstrating that grades in school or college are related in any other behavior of any importance whatsoever. It seems so self-evident to educators that those who do well in their classes must go on to do better in life that they systematically disregard evidence to the contrary. Therefore, when students enter what many student cultures refer to as "the after life," we are then worth something because we think we gave them something which will take them through it. We call it the GPA. Unfortunately, if you look at what the GPA means you get in a lot of real trouble. It is not the straight "A" students in law school who become the most creative or famous lawyers. It is not the straight "A" students in medical school who become the most skillful, important or creative physicians. We then have some problems in terms of what your system of evaluating people means in terms of what American society needs. That is another reason why the whole open learning strategy begins to be so important.

This is the last of our examples of our problems in making judgements about people. Figure 13 is a list of second-grade students in a relatively conventional second-grade classroom in the Far West. They are running according to their academic ability and achievement. The double x's are the high, and the single lines are the lows. Knowing what the list tells us about these second graders, we can make some pretty good predictions about their life. We know which people will probably go to selective public and private universities and colleges, which people will go to less selective institutions,

and which people, if they are lucky, will get into the community colleges. And then there are what we regard as the drags of American life.

But our same 46 second-grade students test differently on some other attributes that might be of some interest to American society: creativity, planning, communication, forecasting, and decision-making. Granted, such tests are all in a mid-range state of development, but still they are not all that bad.

As illustrated in Figures 14 and 15, not only do we learn different things at different rates, we also forget different things at different rates. Take the geography of Brazil for example. You learn it all about age 8, and you have forgotten it all about age 10. Similarly, with division of fractions most likely you get this kind of curve: you learn it fast and you forget it fast.

That leads us to a whole new set of questions. What was the worth of the investment we had to make to get that stuff into people's heads for such a short period of time? Was it worth it? The usual comeback is, "Of course they forget the content. What they retain is the value...the way of analyzing problems, the kinds of ways of going about looking for solutions to things. Well, I have bad news for you, because it doesn't seem that it works that way either. Let me present one study.

I would like to discuss a learning curve for a required natural science course which was taken by over 2,000 students in a major state institution. The students hate to take it. None of them are there because they want to be, and, in fact, we hate to teach it. In this particular class, all of the sections were given a weekly test, and the tests were rotated across each section. These tests were on the complete content

of the course, so you could tell when during a semester learning took place. You get a rough learning curve, as shown in Figure 17. For the first dozen weeks, this course was zilch. The kids were shucking it off, instead of doing the work in their major and other courses that interested them. They were learning how to date, they were learning all the other things which are on the real freshman agenda, many of which don't have too much to do with classwork. Then there was the mid-term, and it was sort of underwhelming. It didn't produce any great results. Then, Week 10, all of the section people said to all of their students, "Okay, if you don't get busy and start to study, you are going to flunk this course."

B.F. Skinner tells us that negative reinforcement never leads to learning. But here we have living proof that he is wrong. Because a week later, the scores shot up to a mean score of 68 and, by the end of the semester, WOW, a very successful course! It was tough to teach because those kids hated that stuff when they came in and they hated it when they left, but it really was a good experience because they got up to a 68 mean score.

After 16 weeks had elapsed, the same testing procedures were repeated with the successful class. As you can see in Figure 18, there is a remarkable parallel between the slope of the learning curve and the slope of the forgetting curve. To the point where, 32 weeks after this little $52,000 venture began, the students were within three percentage points of where they started.

Nevertheless, the people who taught this course said that this material is absolutely essential to every American who is ever going to make any kind of literate policy decisions on scientific matters as a voter American. Of course if that

is true, then all national elections have to be held between semesters!

Now, let's look at another kind of course, an elective course in the philosophy of religion. Students are there because they like it, the faculty members are there because they like to teach it. Figure 20 shows the learning curve from Week One is on an upward trend. That suggests that there is some intrinsic stuff that is going on, and probably, if you had measured the students' knowledge before they started the course, you would be able to see some change. The mid-term again doesn't seem to do much. If there is one conclusion from these studies, it is that mid-terms aren't terribly good at reinforcing. But the real suprise comes in the second semester. The students are no longer taking philosophy of religion; they had their measure of the content of strategies. Yet, their analytical skill in philosophy of religion keeps on going up. "Impossible," we say, "They're taking the course then." Well, we have to get over that notion because it can be demonstrated in a variety of ways that people learn some very difficult and very analytical stuff when they are not taking courses.

Those, then, are the major critiques. Now, let's look at the response higher education and post-secondary education have made to them, as demonstrated in Figure 21. Almost out of desperation, there was the beginning of a large number of new curriculum packaging formats, so we started modularizing like mad, particularly at Grand Valley State, which has a college which is all modular. No courses - 500 or so modules - that is all they have. The audio-tutorial format was established at Purdue; there is the Keller Plan, which is a fascinating kind of thing, featuring learning resource centers, in which students go in and dial into a system, are used at Oklahoma Christian. And there is the intensive course idea where you study one course the whole period.

New kinds of calendars, structures, off-campus learning - these are new ways of packaging the same old stuff. One of the things that concerns me very much right now is that we are very interested in transmitting the same old stuff through a tube to a new audience. I am interested in getting some better ways of looking at what the same old stuff ought to be. This is something on which we really need to work. For every technologist in every project we ought to have a semanticist, and we should have some kind of person who knows something about the intellectural nature of that particular content.

In addition, we developed a lot of evaluation formats, illustrated in Figure 22, which quite often are based on the portfolio or evaluation device the students can bring in. So we responded to something that really looks pretty coherent in a competency-based program.

The competencies chart in Figure 23 shows a philosophy that can really pull a college together. Let's say you have an objective to be able to reason, and that is something we want to do in terms of a whole college. In biology that translates into certain competencies that you have for the major; every biology major must know how to do experimental techniques. That breaks down into a course called Biological Methods, and in that course the student must understand the meaning of control. That translates into a sub-course unit in which the student learns about interval measurement. When you get some direct measures of whether a student can do that, you have something that builds toward that college-wide objective. It is the same thing with philosophy and sociology. At the start, the student knows how to use statistical methods of inquiry, so you force him into taking a course in statistics. And he has to know about sampling and about random sampling, so that leads you to an item which is right out of Robert F. Mager's little book, like - given a telephone book - produce a

random stratified sample of 200 men and 200 women. That, incidentally, is a lot harder than it looks, for some very interesting reasons about what happens in telephone books and for the fact people whose last names start with "A" are significantly different in a lot of ways from people whose last names start with Z.

In addition to competency-based programs, which are an attempt to build a coherent structure, we also have a lot of interest in faculty development, particularly released time for completed degrees, new course planning, developing modules, and video-taping classes. There is a great deal of interest in video tapes.

Some other institutions have even begun to look at how they spend their faculty time, as illustrated in Figure 25. Time, after all, is the most precious asset you have. You may think that buildings are more expensive, but in the long run, there is no question that faculty time is more expensive. If you promote a 30-year-old faculty member to tenure, you have just made a decision involving expenditures of well over half a million dollars if he stays with you until the end of time. Think how businesses make half-million dollar decisions, and think how we appoint people to tenure. In terms of committees, for example, Austin University looked at its committee structure and found that it was spending an incredible amount of money just in terms of the central committees at the University. In terms of people's time, it was $400,000 for one year. For that we got five decisions and one of them was wrong.

Turning to our quest for the new adult, suprisingly enough, more adults were studying in non-college and non-university settings than in college and university setting in 1969. Where were they? IBM, Xerox, Breaking Out, Kodak, newspapers, television- these media were more appealing. More

people were being fascinated by what they could offer than by colleges or universities. So even then, those adults in learning programs who were in colleges and universities were in the minority. There were more people outside than inside.

Let's look at the kinds of programs that have been developed for new learners, as shown in Figure 28. This can be studied in greater detail in Leland Medsker's new book, "Extending Opportunities for a College Degree," published by the Center at Berkeley. There are four things you can do: first, extend the time you have the campus open; second, develop a liberal studies kind of program in which you try to get to the needs of adults; third, initiate individualized study or learning contract programs; and fourth, offer degree by examination.

The new learners are supposed to be women, ethnic minorities, blue collar working class, the unemployed, those who are new to higher education, according to the new ideology. According to four different data sources, the new learners are actually rather heavily male, caucasian middle-class, and of managerial backgrounds. They are almost all employed full-time, they have some previous college experience, they are 35 years old, they earn about $12-15 thousand a year, and they are very high in both the desire to achieve and persistence. So, what we have currently in the new learner is not the group that we sought, but the people who are simply an older version of the 18 to 24-year-old college students. In other words, the mission of reaching people who have never been reached by higher education or any form of post-secondary education is still before us. And that mission is terribly important.

As we consider new methods, we must think about how we are going to evaluate them. There are only three evaluation questions that matter, whether you are at Harvard or Miami-

Dade, and whether you are evaluating a program or a student or a faculty member. They are: First, what are the criteria (or what are the things that we want the person or the program to do)? Second, what are the standards? And third, is the technique effective?

My contention is that the greatest problem is in the area of standards. How high a level of performance do we require and why? How do we justify a given learner performance?

Some who are in competency-based programs say, "That question doesn't matter anymore because we have defined competencies, and therefore we don't need to worry about standards. If you are competent, you are competent and that is all there is to it." But is that really true? Let's take a very simple competency like changing a tire on a car. What could be simpler than that - either you can do it or you can't. When you think about it, you have a lot of questions there. Does the standard refer to changing any tire on any car? How about trucks and motorcycles? Do you have to know how to use equipment like air wrenches? Do you have to know how to repair leaks in tires? How much time are you going to give this person in order to show his competency in changing a tire? You know that if you have certain kinds of cars the threads on one side of the car are reversed from the other side, so if you try to put the wheel on the same way, you strip those little gems that cost about $100 to get replaced. So do you want your competent person to know about wheel weights?

It appears, then, that competency-based programs cannot get away from the question of standards. We have gotten much better in most of the open learning programs in terms of specifying criteria, and we know what kinds of judgments we can make, but we really haven't defined standards as well as we might. Standards must come from some kind of reference group, and

there are about three or four of them. The first possible reference group is all previous performers; in other words, the faculty says that according to all students taught, you get a "B". The second is all learners of the current group in which the guide is up for 10 years. You are told by the Dean that you are being judged against Bill, Joe, Suzy, and Jane and two of the four of you will get tenure. That is the current group. And the third possible reference group is performance on some kind of unspecified platonic ideal. Here, the tenure decisions are made somewhat on the basis of "I know 'A' when I see one," and I have never seen one. The other possibility is comparing present performance with previous performance of the same person. This leads us away from norm reference tests and leads us toward criterion reference testing in which we say that we will develop some ways of showing you what your current mistakes are so that you will do better in the future.

We are beginning to understand a lot of things about how you can look at human learning, particularly along certain kinds of skill hierarchies, as shown in Figure 31. There are skills involved in analysis of data, starting with comparing and copying and moving up to coordinating and criticizing. There are skills in working with people, which begin with taking instruction and exchanging information and lead up, in terms of difficulty to negotiating. And there are skills in working with things which go from one end to the other. Now we are beginning to think about skill hierarchies in all these areas of working with data, working with people, and working with things, and about how we can develop an evaluation system that will help an adult launch on his particular road upward. That approach requires paying a great deal more attention to diagnostic techniques that we have developed before.

We also have to remember that all adults are "growing up" - that is, going through a series of developmental stages

throughout life. Art Chickering discussed this, in terms summarized in Figure 32. As you are teaching adults, you must remember that they are going through some particular problems: leaving the family, probably by joining the army or going to college; getting, reacting to, and/or losing a mentor; the funny settling down and moving up period, about age 30-38, when you want to settle down and have a home and raise your family, but you want to be able to move at a moment's notice when some job like being director of NIE comes...The conflicts there are very real and very important, and if you don't know what a person is going through, you have trouble dealing with him. Then there is the mid-life transition (39-43), when people start to have some questions like, "Did I marry the right person? Did I go to the right college? Am I in the right job?" They start to fantasize about what things might be like, and that is why I call that stage "middlescence," because it is so much like adolescence, only you've grown a little older. And there is the restabilization period at about 43-50, in which people tend to put things back together, and if they are still married, the marriage begins to work a little better. Then there is the finishing up stage, 50-65, which has not been studied much at all.

So adults are growing up. Maybe they are doing something like Maslow's idea that they grow up through certain kinds of stages, which can be violated. First they have to feel that they belong and they have to feel some kind of security and self esteem. And before they can go on to all such good things as knowledge, truth, goodness, and beauty, they must feel some kind of security and self-esteem.

Turning to something that has not been made public before, but is terribly important, when we think about adults needs in higher education, we tend to think in cognitive terms alone. Data which comes from California Field Poll is

fascinating in that it reveals the adult's concern for himself as a person, which has nothing to do with getting a degree to taking a course. Forty-one per cent want to take some kind of course, according to this particular survey, which is representative of the California population as a whole, but 31 per cent want some kind of assessment of their personal competencies: What am I good at? What kinds of personal growth could I engage in? What is my potential? And that has nothing to do with getting a degree or taking a course. Forty-eight per cent want to test strengths, weaknesses, certain skills and subjects, and 27 per cent want information about educational opportunities in the region. But one of the most striking figures shows that 20 per cent of the population were willing to admit that they felt they had a need for personal counseling. This information was obtained in a face-to-face interview with another human being. One-fifth of the adult population in California, at least in this sample, were willing to say that they needed some kind of personal counseling. What they need is what most counseling departments are not prepared to offer, and we suggest that there is an enormous job there that needs to be done in terms of some kind of social service. Sixteen per cent want to put together some kind of a record of all their job and educational experience, just for the fun of it, just to see where they have been. All of that, then, is simply an indication that there are a large number of American adults who have strong interests in the affective domain, or in getting services that might make them more interesting human beings or make their lives a little better. A very unusual kind of system including feeders that lead into diagnostic centers might be needed to make this come about.

The data is now persuasive enough to make me feel that a fairly significant sector of the American population is not terribly happy with the way it is spending its life, and it wants something a little more, although it is not quite sure

what it is. There is a belief that, "I am capable of doing more than I am currently doing." Maybe we should have something like a regional examining institute, in which we can separate out credentials, including what businesses want, and degrees, which is what colleges and universities offer. If you get a credential, it means that you can do a certain kind of job. The degree means that you have a certain kind of intellectual skill that means you can engage in certain intellectual activities. The degrees and credentials could be separated out so that we wouldn't have to be bothered by the Griggs case.

In conclusion, these data suggests that we really need to think far more broadly about the mechanisms and techniques that will meet the genuine needs of adults, in addition to those which we can meet so easily by providing extra courses and new forms of degree structures. If there is something to think about in the next five years, it has to do with how we can increase the feeling of quality of life, the feeling of Americans that they are important and worthwhile people. One reason that faith in institutions is declining is that people's faith in themselves is beginning to decline. It would be quite easy to reverse that trend. I would suggest an effort to do so as an agenda item for the next five years.

FIGURE 1

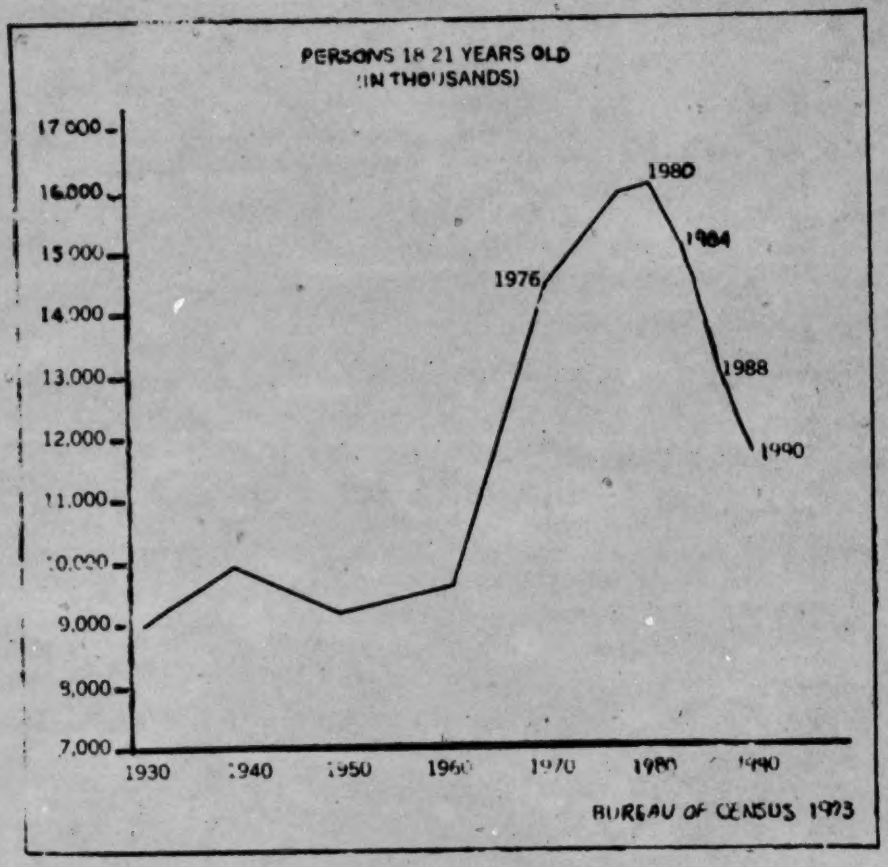


FIGURE 2

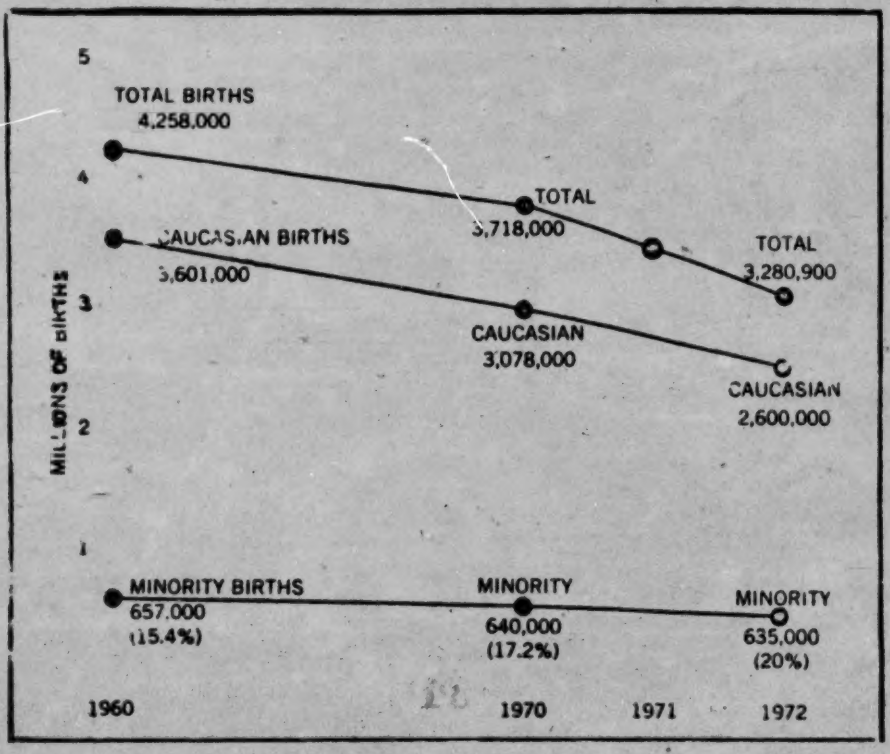


FIGURE 3

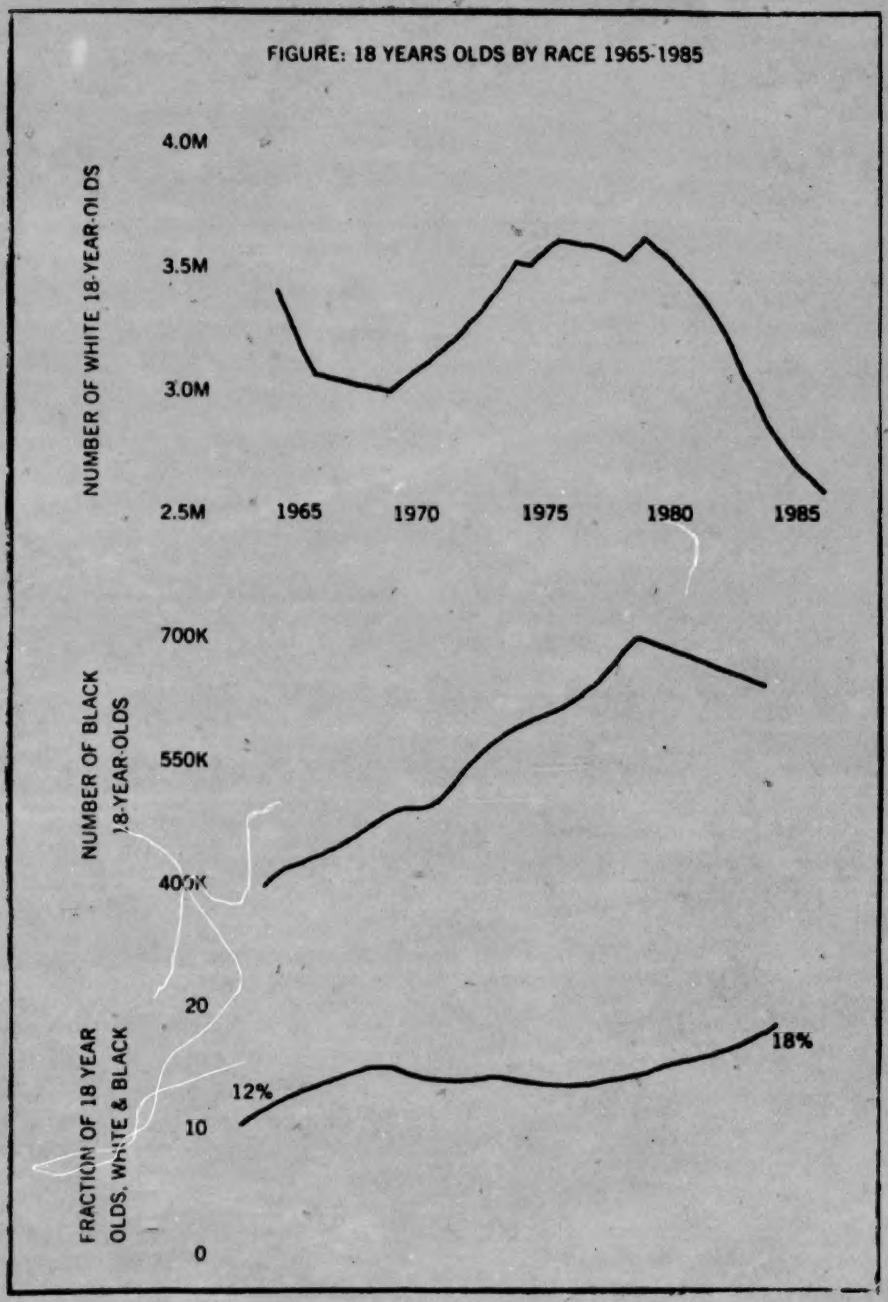


FIGURE: 18 YEARS OLDS BY RACE 1965-1985
NUMBER OF WHITE 18-YEAR-OLDS
4.0M
3.5M
3.0M
2.5M
1965
1970
1975
1980
1985
NUMBER OF BLACK 18-YEAR-OLDS
700K
550K
400K
FRACTION OF 18 YEAR OLDS, WHITE & BLACK
20
10
0
12%
18%

FIGURE 4

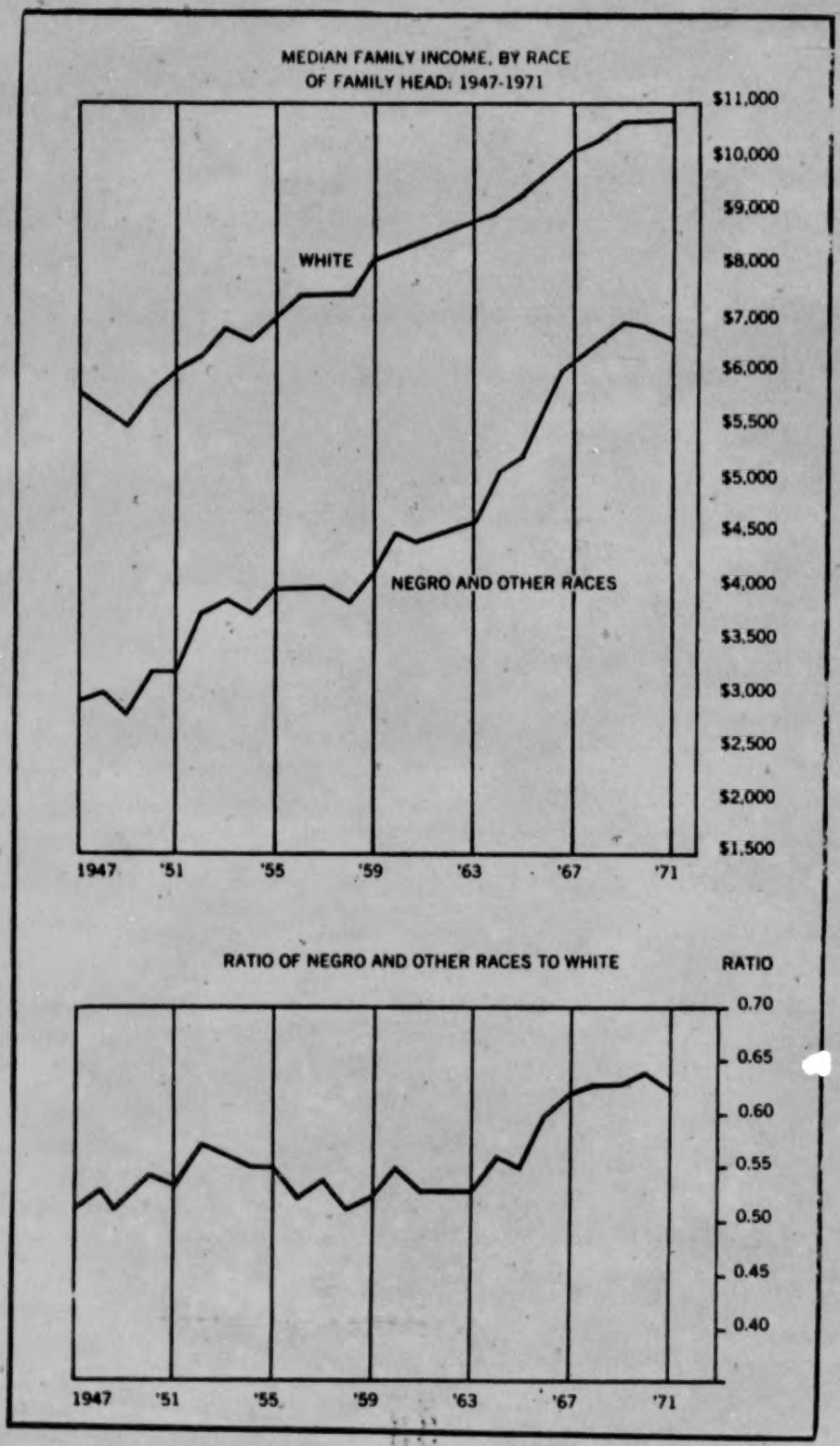

MEDIAN FAMILY INCOME, BY RACE
OF FAMILY HEAD: 1947-1971
WHITE
NEGRO AND OTHER RACES
$11,000
$10,000
$9,000
$8,000
$7,000
$6,000
$5,500
$5,000
$4,500
$4,000
$3,500
$3,000
$2,500
$2,000
$1,500
1947
'51
'55
'59
'63
'67
'71
RATIO OF NEGRO AND OTHER RACES TO WHITE
RATIO
0.70
0.65
0.60
0.55
0.50
0.45
0.40
1947
'51
'55
'59
'63
'67
'71

FIGURE 5

THREE STAGES OF HIGHER EDUCATION

1) ARISTOCRATIC STAGE (PLACE IN SOCIETY FIXED BY BIRTH)
   NO NEED FOR TESTING FOR ADMISSION OR GRADUATION

2) MERITOCRATIC ERA (1947-1970)
   LARGE NUMBERS SEEK ADMISSION, NOT ENOUGH PLACES.
   TO REJECT PEOPLE, DEVELOPED PROXY TESTS OF "MERIT" CALLED APTITUDE TESTS.
   HEAVY USE OF TESTS FOR ADMISSION, NOT FOR GRADUATION
   (INSTITUTIONS HAD MONOPOLY ON "MERIT" PRODUCTION. NOT QUESTIONED)

3) EGALITARIAN ERA
   DECLINE IN NUMBERS SEEKING HIGH EDUCATION.
   GREATER BELIEF IN EDUCATING EVERYONE TO THEIR OWN LIMIT.
   SOCIETY WANTS TO "DEMYSTIFY" HIGHER EDUCATION.
   JOBS ARE SCARCE; COURTS HAVE STRESSED EQUALITY AND AFFIRMATIVE ACTION.
   LACK OF INTEREST IN ADMISSIONS TESTING. (DECLINE IN S.A.T SCORES FOR 10 YEARS).
   GREAT INTEREST IN PROFICIENCY TESTING (JOB-RELATED) FOR GRADUATION.
   WHAT COUNTS IS NOT FAMILY, NOR APTITUDE, BUT COMPETENCE IN AREAS DIRECTLY RELATED TO LIFE.

FIGURE 6

APTITUDE TESTS ARE USED TO PREDICT GRADES IN COLLEGE, BUT WHAT DO GRADES PREDICT?

"RESEARCHERS HAVE, IN FACT, HAD GREAT DIFFICULTY IN DEMONSTRATING THAT GRADES IN SCHOOL ARE RELATED TO ANY OTHER BEHAVIOR OF IMPORTANCE... IT SEEMS SO SELF-EVIDENT TO EDUCATORS THAT THOSE WHO DO WELL IN THEIR CLASSES MUST GO ON TO DO BETTER IN LIFE THAT THEY SYSTEMATICALLY HAVE DISREGARDED EVIDENCE TO THE CONTRARY THAT HAS BEEN ACCUMULATING FOR SOME TIME."

(DAVID McCLELLAND, "TESTING FOR COMPETENCE RATHER THAN FOR INTELLIGENCE" AMERICAN PSYCHOLOGIST, JANUARY, 1973)

FIGURE 7

CURRICULAR OFFERINGS IN TWO-YEAR COLLEGES

	1973 PUBLIC	1973 PRIVATE
ACADEMIC (TRANSFER OR PREPROFESSIONAL)	100%	93%
OCCUPATIONAL (ASSOCIATE DEGREE)	100	70
OCCUPATIONAL (CERTIFICATE)	76	14
CONTINUING ED (ADULT, SPECIAL INTEREST)	69	8
DEVELOPMENTAL, PREPARATORY, OR REMEDIAL	46	7
ONLY ACADEMIC & OCCUPATIONAL ASSOCIATE PROGRAMS	19	49
ALL PROGRAMS EXCEPT DEVELOPMENTAL	26	9
ALL PROGRAMS	39	0

(MORRISON & FERRANTE, COMPENSATORY EDUCATION IN TWO-YEAR COLLEGES, CENTER FOR STUDY OF HIGHER EDUC., PENN. STATE U. REPORT #21, 1973)

FIGURE 8

HARRIS POLL - PERCENTAGE OF AMERICANS WHO EXPRESS FAITH IN U.S. SOCIAL AND POLITICAL INSTITUTIONS 1967 AND 1972

	1967	1972
1) FAITH IN LEADERSHIP OF MAJOR BUSINESS CORPORATIONS	55%	27%
2) FAITH IN BANKS AND OTHER FINANCIAL INSTITUTIONS	67%	37%
3) FAITH IN THE MILITARY	62%	27%
4) FAITH IN THE CONGRESS	41%	19%
5) FAITH IN CHIEF EXECUTIVE	41%	23%
6) FAITH IN THE SCIENTIFIC COMMUNITY	56%	32%
7) FAITH IN MEDICAL DOCTORS	73%	61%

(SOCIAL EDUCATION MARCH, 1972)

FIGURE 9

LEVEL OF CONFIDENCE IN AMERICAN INSTITUTIONS

SURVEY OF: CROSS-SECTION OF CALIFORNIA ADULTS MAY 1973

	1	2	3	4
RESEARCH SCIENTISTS	58%	34%	5%	3%
LOCAL POLICE DEPARTMENT	51	40	7	2
MEDICAL PROFESSION	43	44	13	*
THE FBI	43	40	13	4
CONSUMER GROUPS	37	42	14	7
THE PRESIDENCY	34	34	31	1
PUBLIC UTILITIES	33	48	17	2
SUPREME COURT	31	45	21	3
CONGRESS	30	53	15	2
ENVIRONMENTAL GROUPS	30	48	17	5
NEWS MEDIA (NEWSPAPERS, TELEVISION, AND NEWS MAGAZINES)	27	55	18	*
UNIVERSITIES & COLLEGES	25	62	11	2
ORGANIZED RELIGIONS (CHURCHES)	24	46	28	2
PUBLIC SCHOOL SYSTEM	23	51	25	1
FINANCIAL INSTITUTIONS	22	51	25	2
ORGANIZED LABOR	13	50	34	3
STATE LEGISLATURE	12	67	16	5
MANUFACTURING CORPORATIONS	9	55	30	6
FOOD COMPANIES	9	52	35	4

* LESS THAN ONE-HALF PERCENT

1 - A LOT 2 - SOME 3 - NOT MUCH 4 - NO OPINION

FIGURE 10

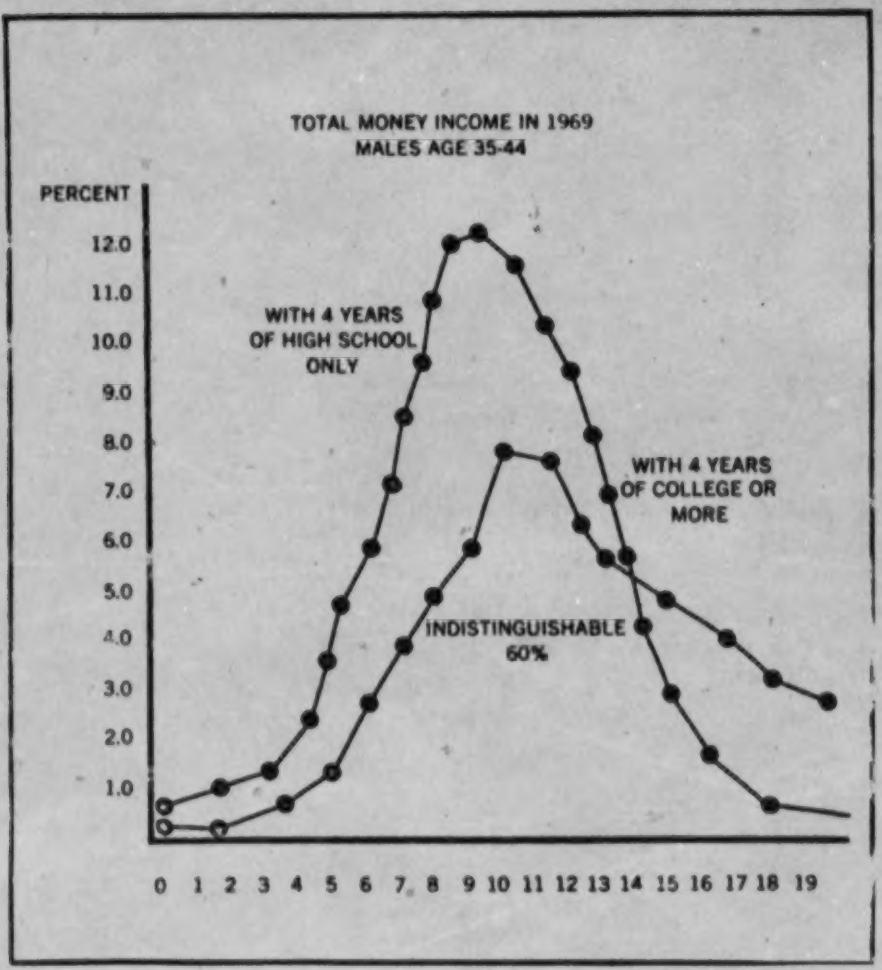


FIGURE 11

U.S. YEARLY INCOME LEVELS, AGES 25-34 (MALE AND FEMALE)

1970	1972	INCREASE
HIGH SCHOOL GRADS:		
$8,377	$9,451	+ $1,074
COLLEGE GRADS:		
$11,133	$11,553	+ $420

(FROM STANLEY NOLLEN, GEORGETOWN U, DEC., 1973)

FIGURE 12

SUPREME COURT, IN GRIGGS VS. DUKE POWER (ON TESTS USED FOR JOB SELECTION, AS WELL AS DEGREES)

"WHAT CONGRESS HAS FORBIDDEN IS GIVING THESE DEVICES AND MECHANISMS CONTROLLING FORCE UNLESS THEY ARE DEMONSTRABLY A REASONABLE MEASURE OF JOB PERFORMANCE."

YOU CAN'T MEASURE JOB PERFORMANCE OF THOSE WHO ARE ONLY APPLICANTS.

YOU CAN:

1) DEVELOP PREDICTIVE (PROXY) MEASURES
2) SAMPLE ACTUAL JOB TASKS

QUESTION: DOES THE PH.D. DEGREE SATISFY THE CRITERION PREDICTING SUCCESS IN COLLEGE TEACHING, AS IN 1)? IF NOT, IS IT A LEGAL DEVICE FOR REJECTING APPLICANT FOR TEACHING POSITIONS?

WHAT WOULD PREDICT COLLEGE TEACHING SUCCESS? CAN WE LEGALLY USE TESTS LIKE SAT FOR ADMISSIONS PURPOSES? WHAT DO SUCH TESTS PREDICT?

FIGURE 13

MULTIPLE TALENT SCORES OF 26 SECOND GRADE STUDENTS

STUDENTS	ACADEMIC	CREATIVITY	PLANNING	COMMUNICATING	FORECASTING	DECISION MAKING
1	++	+	-	0	0	0
2	++	+	-	0	-	-
3	++	-	0	+	-	-
4	++	-	0	0	0	0
5	++	-	-	0	0	0
6	++	-	-	0	0	0
7	++	-	0	0	-	-
8	+	++	+	++	+	0
9	+	++	+	+	0	0
10	+	0	++	0	+	+
11	+	+	+	++	0	0
12	+	+	0	0	+	++
13	+	++	0	+	0	0
14	+	-	-	-	0	-
15	0	+	-	++	-	0
16	0	++	+	+	0	0
17	0	-	-	++	0	0
18	-	++	+	+	0	0
19	-	++	0	0	0	-
20	-	++	-	0	0	0
21	-	++	-	0	-	-
22	-	+	++	0	0	-
23	-	-	0	++	0	0
24	-	0	0	-	+	++
25	-	-	0	0	+	+
26	-	-	-	-	-	++

LEGEND: ++ = HIGHEST + = ABOVE AVERAGE 0 = AVERAGE - = BELOW AVERAGE

FIGURE 14

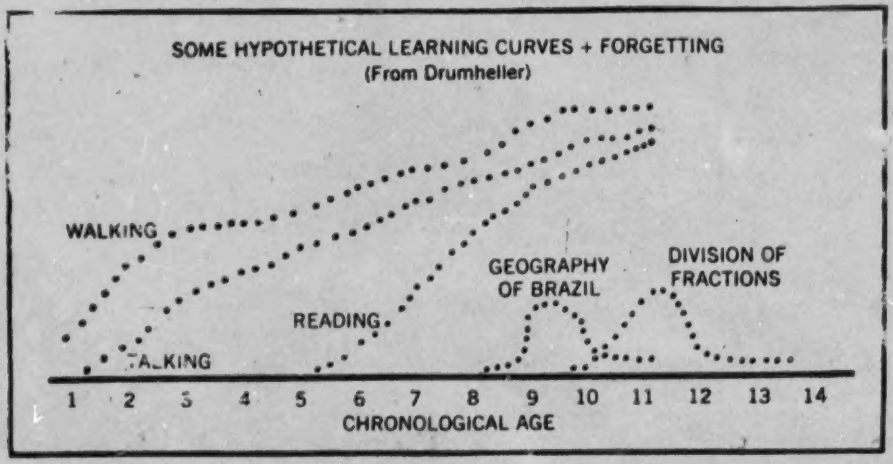
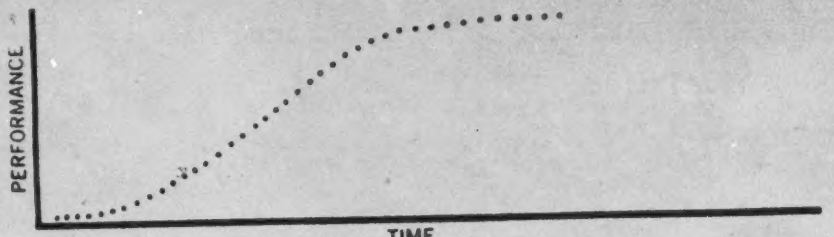
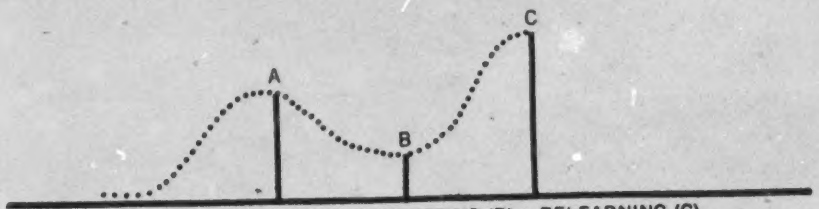


FIGURE 15



"CLASSIC" S LEARNING CURVE



CURVE OF LEARNING (A) FORGETTING (B) + RELEARNING (C)
(From Drumheller of Ed. Tech Systems)

FIGURE 16

WHAT HAPPENS AFTER FORGETTING?

1) LEARNER CAN RECLAIM ORIGINAL LEARNING LEVEL WITH PRACTICE
2) LEARNER CAN RECLAIM ORIGINAL LEARNING LEVEL WITH PRACTICE AND INSTRUCTION
3) LEARNER CAN RECLAIM ORIGINAL LEARNING LEVEL ONLY WITH COMPLETE PROGRESS
4) LEARNER CANNOT RETURN TO ORIGINAL LEARNING LEVEL

WHAT SORTS OF THINGS DECLINE WITHOUT USE, NEED MAINTENANCE?

1) STUDY SKILLS (READING SPEED AND COMPREHENSION, WRITING ABILITY)
2) ACADEMIC SKILLS (SOLVING EQUATIONS, EDITING, DOING ANALOGIES, DEVELOPING HYPOTHESIS, FORMULATING PROBLEMS, ETC.)
3) PRACTICAL SKILLS (USING A CALCULATOR, RUNNING A LATHE, TYPING, KEY PUNCHING, DRIVING, ETC.)

QUESTION: WHAT IS THE MOST DESIRABLE LEVEL OF LEARNING?

MAINTENANCE? HOW LONG SHOULD THE LEVEL BE MAINTAINED? AT WHAT COSTS, WHAT BENEFITS? A CAR IS GUARANTEED FOR A GIVEN TIME AND USE PERIOD. CAN WE "GUARANTEE" ANYTHING ABOUT EDUCATION?

41

FIGURE 17

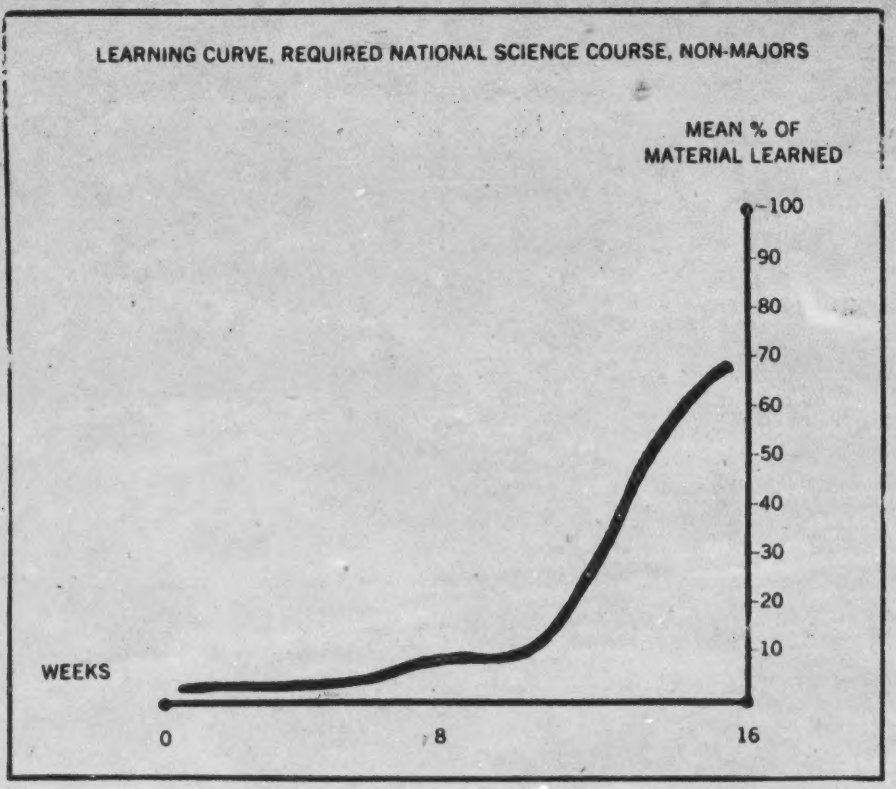


FIGURE 18

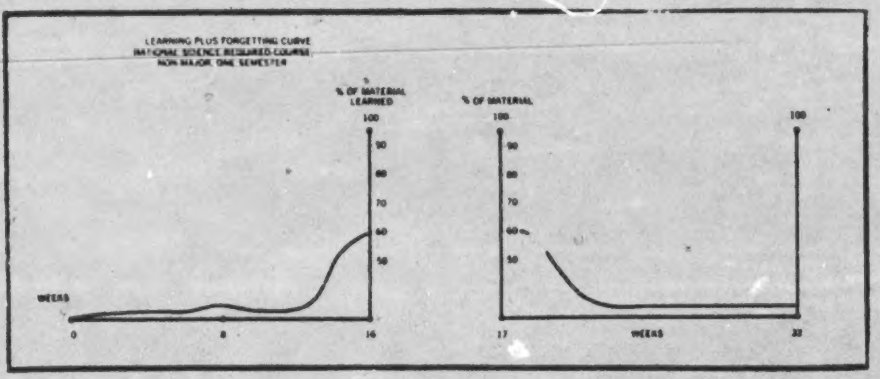


FIGURE 19

SOME VIEWS OF CURRICULUM:

1) THAT WHICH IS HOPED (COLLEGE AND DEPARTMENTAL GOALS AND OBJECTIVES, ALSO FOR COURSES, MAJORS, DISTRIBUTION)
2) THAT WHICH IS TAUGHT (LECTURES, BOOKS, TAPES, LABS, ETC.)
3) THAT WHICH IS LEARNED, (CHANGES IN STUDENT FUND OF INFORMATION AND SKILLS, ALSO VALUE AND ATTITUDE CHANGE)
4) THAT WHICH IS LEARNED, RETAINED AND USED (A VERY SMALL PROPORTION OF MOST COURSES OF STUDY, EITHER AS #2 OR #3 ABOVE) MUCH OF #3 DOES NOT OCCUR IN CLASSROOM SETTINGS AT ALL.

FIGURE 20

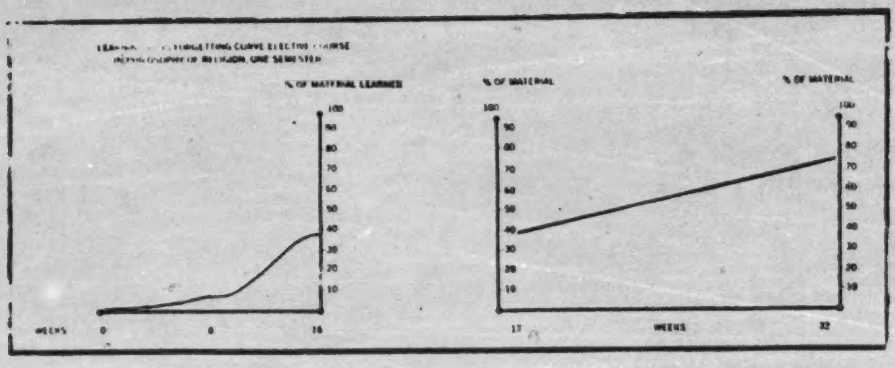


FIGURE 21

CURRICULUM "PACKAGING" FORMATS

1) MODULARIZATION (GRAND VALLEY STATE, COLLEGE IV, MANY OTHERS)
2) AUDIO-TUTORIAL (PURDUE)
3) "KELLER PLAN" (LECTURES OF COURSE MIMEO'D, SOME MODULES, FACULTY USED AS CONSULTANTS)
4) LEARNING RESOURCES CENTERS (OKLAHOMA CHRISTIAN COLLEGE, ORAL ROBERTS, OAKLAND-MICHIGAN)
5) INTENSIVE COURSE PLANS (COLORADO) AND NEW CALENDARS-4-1-4
6) OFF-CAMPUS LEARNING
7) PROGRAMMED INSTRUCTION (PLATO-ILLINOIS)

EVALUATION FORMAT

1) COMPETENCY-BASED LEARNING (STERLING, MARS, HILL, ALVERAD, COLLEGE IV AT U. MASS.) BOWLING GREEN, ALSO IN ED AND NURSING SCHOOLS)
2) CREDIT BY EXAM (CLEP, CAEL)
3) CONTRACT LEARNING (NEW COLLEGES AT ALABAMA AND FLORIDA, OTTAWA, MORGAN STATE, 25 OTHERS)
   A.) PROFESSIONAL GROWTH CONTRACTS FOR FACULTY AND ADMIN. HAMPSHIRE, GORDON COLLEGE, SEVERAL COMMUNITY COLLEGES
   B) MBO-BASED ON ATTAINABLE OBJECTIVES-RELCV
4) FIELD EXPERIENCE PROGRAMS (MARS HILL) PORTFOLIOS, LOGS AND DIARIES, SUPERVISOR REPORTS, GAMES AND SIMULATIONS, ON-SITE EVALUATIONS, JURY PANELS, CLIENT REPORTS

FIGURE 22

EVALUATION PROCEDURES

1) PORTFOLIOS (PROBLEM: ANECDOTAL, BASED ON ESSAYS, FEW ATTEMPTS AT STANDARDS-NEEDS REFERENCE CHECK-LIST)
2) GAMES AND SIMULATIONS: (PROBLEM: USED MAINLY FOR SUMMATIVE PURPOSES)
3) LEARNING CONTRACTS (PROBLEM: GOOD ON CLEAR CRITERIA AND TECHNIQUES, POOR ON STANDARDS-NEEDS CHECKLIST)
4) JURY PANELS (PROBLEM: OFTEN USED WITHOUT CLEAR CRITERIA OR STANDARDS. JURY DOESN'T AGREE ON EITHER OF THESE IN ADVANCE OF EVALUATION)
5) LOGS AND DIARIES (PROBLEM: LACK OF CONTINUITY, OFTEN NEGLECT CRITICAL EVENTS, LOW STUDENT MOTIVATION. POTENTIAL HIGH, STUDENTS NEED TRAINING)
6) SELF-SCORING MODULES (PROBLEM: HARD FOR STUDENT TO ASPIRE TO MORE PERFORMANCE THAN MODULE ALLOWS)
7) FIELD REPORTS (PROBLEM: OFTEN NO LINKAGE WITH ON-CAMPUS ACTIVITY, NO WAY TO COMBINE ASSESSMENTS. ALSO, USUALLY SUMMATIVE; COULD BE FORMATIVE ALSO.)

FIGURE 23

LEVEL I: COLLEGE COMPETENCIES	"TO BE ABLE TO REASON"		
LEVEL II: MAJOR COMPETENCIES	BIOLOGY	PHILOSOPHY	SOCIOLOGY
	CAN USE EXPERIMENTAL TECHNIQUES	CAN ANALYZE AND PRODUCE PHILOSOPHICAL ARGUMENTS	KNOWS HOW TO USE STATISTICAL METHODS OF INQUIRY
LEVEL III: COURSE COMPETENCIES	BIOLOGICAL METHODS	PHILOSOPHICAL REASONING	STATISTICS
	UNDERSTAND THE MEANING AND USE OF CONTROLS	UNDERSTANDS INDUCTIVE ARGUMENTS	KNOWS HOW TO USE SAMPLING TECHNIQUES
LEVEL IV: COURSE MODULES OR SUB-COURSE UNITS	INTERNAL MEASUREMENT	INDUCTION	SAMPLING
	UNDERSTANDS AND CAN USE SPATIAL AND TIME POINTS	UNDERSTANDS THE "NEW RIDDLE OF INDUCTION"	UNDERSTANDS RANDOM SAMPLING
LEVEL V: DIRECT MEASURES	USE OF TIME POINTS	PREDICATES	INTERPRETS SAMPLES
	CAN DESIGN AND RUN AN EXPERIMENT REQUIRING TIME CHECKS	CAN PRODUCE A "GRUE-LIKE" PREDICATE	CAN DRAW AND INTERPRET A STRATIFIED PROBLEM SAMPLE
LEVEL VI: ITEM FOR DIRECT MEASURES	CALCULATE THE TEST TIME INTERVALS FOR A STUDY OF OXYGEN LEVELS IN TISSUE DEGENERATION	GIVEN THE PREDICATE "IS A BOY" AND "IS A GIRL", PRODUCE A PAIR OF CONTRADICTORY PROJECTABLE PREDICATES	GIVEN A TELEPHONE BOOK, CAN PRODUCE A RANDOM STRATIFIED SAMPLE OF 200 MEN AND 200 WOMEN

FIGURE 24

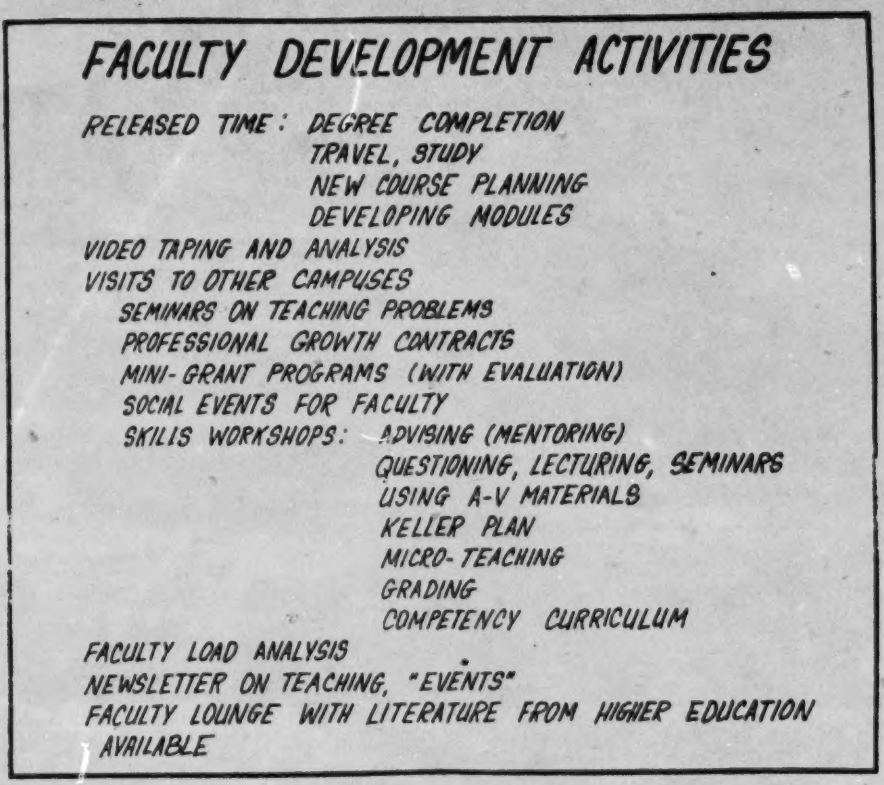


FIGURE 25

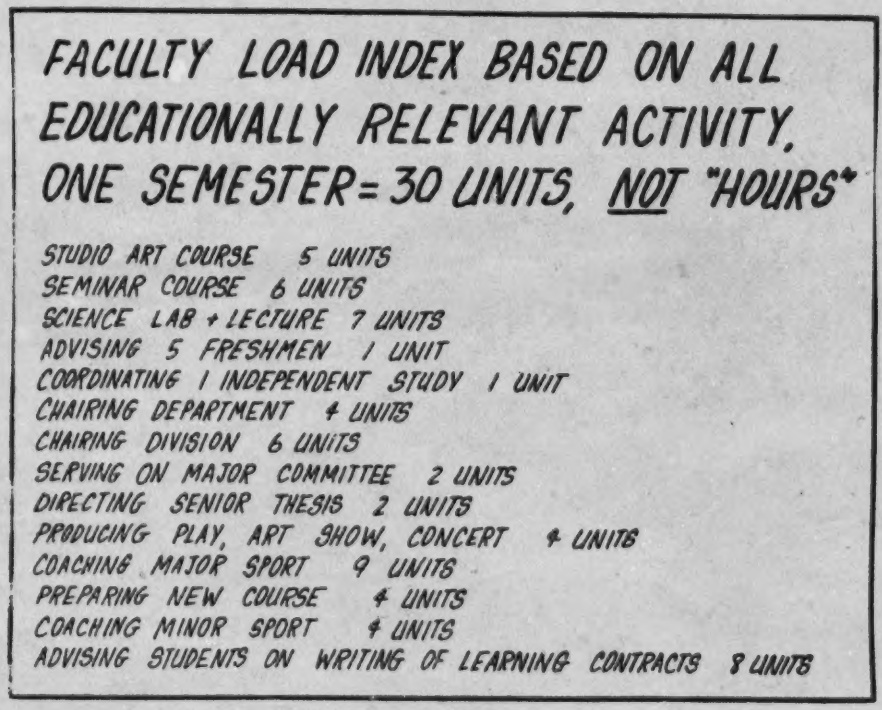

FACULTY LOAD INDEX BASED ON ALL EDUCATIONALLY RELEVANT ACTIVITY. ONE SEMESTER = 30 UNITS, NOT "HOURS"
STUDIO ART COURSE 5 UNITS
SEMINAR COURSE 6 UNITS
SCIENCE LAB + LECTURE 7 UNITS
ADVISING 5 FRESHMEN 1 UNIT
COORDINATING 1 INDEPENDENT STUDY 1 UNIT
CHAIRING DEPARTMENT 4 UNITS
CHAIRING DIVISION 6 UNITS
SERVING ON MAJOR COMMITTEE 2 UNITS
DIRECTING SENIOR THESIS 2 UNITS
PRODUCING PLAY, ART SHOW, CONCERT 4 UNITS
COACHING MAJOR SPORT 9 UNITS
PREPARING NEW COURSE 4 UNITS
COACHING MINOR SPORT 4 UNITS
ADVISING STUDENTS ON WRITING OF LEARNING CONTRACTS 8 UNITS

FIGURE 26

SUGGESTED OUTCOMES OF FACULTY DEVELOPMENT

- NO. OF COURSES SUBSTANTIALLY REVISED
- NO. OF NEW COURSES ADDED
- EFFECTIVENESS OF COURSE EVALUATIONS
  - A. BETTER (MORE USEFUL) STUDENT RATINGS
  - B. INDIVIDUAL FACULTY USE OF VIDEO TAPE
  - C. COLLEAGUE CLASS VISITATIONS
  - D. DEPARTMENT MEETINGS ON TEACHING
- REDESIGN OF FACULTY LOAD, MORE EFFECTIVE USE OF FACULTY TIME
- IMPROVED FACULTY MORALE (NOT INITIALLY)
- QUALITY OF DEPARTMENTAL DECISION-MAKING
- INCREASING EQUITY OF FACULTY LOADS
- ABILITY OF FACULTY TO DEVELOP CLEAR GOALS "KNOW WHEN GOALS ACHIEVED"
- INCREASED FACULTY SKILL LEVELS
  DISCUSSIONS, QUESTIONING, LECTURING, EXAMINING, ADVISING
- SELF-CONSCIOUSNESS OF FACULTY RE: TEACHING
- HIGHER LEVELS OF STUDENT LEARNING, DESIRE
- NO. OF "ARROWS IN THE QUIVER" OF EACH TEACHER
- GREATER AWARENESS OF INSTRUCTIONAL COSTS
- COHERENCE OF COURSES ↔ MAJORS ↔ PROGRAMS

FIGURE 27

COMMITTEES

1) CUT DOWN IN NUMBER OF COMMITTEES
2) CLARIFY FUNCTIONS OF EXISTING COMMITTEES
3) ELIMINATE PARALLEL STRUCTURES (DUPLICATION)
4) ALLOW ONE DEBATE, AVAILABLE TO ALL (OPEN HEARING)
5) CONSIDER BROADLY BASED SENATE
6) SOME COMMITTEES ADVISORY ONLY (TRIAL BALLOON)
7) RELATE DECISIONS-MAKING & IMPLEMENTATION
8) DECREASE SIZE OF COMMITTEES (5-8)
9) GOOD ACCESS TO FINANCIAL INFORMATION
10) TRAINING PROGRAMS FOR COMMITTEES
11) ELIMINATE OLIGARCHIES

FIGURE 28

TYPES OF PROGRAMS FOR "NEW LEARNERS"

APPROACH	PROGRAM	INSTITUTION
EXTENDED CAMPUS (FLEXIBLE SCHEDULING, TIME, RESIDENCY, DELIVERY)	COURSES, CONVENTIONAL CURRICULA, DEGREE REQ	JOHN HOPKINS EU/UC, ED/C. BGS/ROOSEVELT
LIBERAL STUDIES/ADULT DEGREE. RELATE ADULT NEEDS TO LIBERAL STUDIES	ALTERNATING SELF-STUDY & RESIDENT SEMINARS	BLS-OKLAHOMA BLS-SYRACUSE GODDARD-ADVANCE DEGREE PROGRAM BGS-ROOSEVELT
INDIVIDUALIZED STUDY (LEARNING CONTRACTS, VARIED LEARNING RESOURCES. EXP. COMMUNITY-PEOPLE AND INSTITUTIONS, LIBRARIES, MUSEUMS)	INDIVIDUALIZED, CONTRACTS- FEW IF ANY "REQUIREMENTS" FOR ALL STUDENTS	ESC. MMSC CC-VERMONT FIU-EXT. DEGREE LIFE LAB-MIAMI-DADE
DEGREE BY EXAMINATION, DEMONSTRATE MASTERY BY EXAMINATIONS - NO COURSES REQUIRED	PRESCRIBED OUTCOME CURRICULA NON-INSTRUCTIONAL	NEW YORK REGENTS EXTERNAL DEGREE

FIGURE 29

THE "NEW LEARNERS" SHOULD BE:

1) WOMEN
2) ETHNIC MINORITIES
3) BLUE COLLAR, "WORKING CLASS"
4) UNEMPLOYED
5) THOSE NEW TO HIGHER EDUCATION

THE "NEW LEARNERS" ARE:

1) MALE (60-90%)
2) CAUCASIAN (85%)
3) MIDDLE CLASS (WHITE COLLAR, HEAVY FROM MANAGERIAL AND PROFESSIONAL)
4) EMPLOYED FULL-TIME (95%)
5) SOME PREVIOUS COLLEGE EXPERIENCE (60% w/4 YEAR PROGRAMS)
6) 35 + YEARS OLD
7) MAKING $12-15,000 / YEAR
8) HIGH ON DESIRE TO ACHIEVE, PERSISTENCE, INDEPENDENCE, MOTIVATION (AN "OLDER VERSION" OF CONVENTIONAL 18 TO 24-YEAR-OLD COLLEGE STUDENTS)

FIGURE 30

EVALUATION PROCESSES

1) CRITERIA: WHAT ARE THE SKILLS, BEHAVIOR, ATTITUDES, ETC., WE WISH TO MEASURE?

2) STANDARDS: HOW HIGH A LEVEL OF PERFORMANCE DO WE REQUIRE?

3) TECHNIQUE: WHAT MEASUREMENTS AND INSTRUMENTS CAN WE USE TO TEST FOR THE DESIRED 1) SKILLS, BEHAVIORS, ATTITUDES, ETC. AND 2) THEIR LEVEL OF ATTAINMENT?

FIGURE 31

SKILL HIERARCHIES (HIGHER SKILLS AT TOP)

DATA	PEOPLE	THINGS
SYNTHESIZING	MENTORING	PRECISION WORKING SETTING UP
COORDINATING	NEGOTIATING	MANIPULATING
ANALYZING	SUPERVISING	OPERATING DRIVING } CONTROL
COMPUTING COMPILING	CONSULTING INSTRUCTING TREATING	HANDLING: FEEDING
COPYING	COACHING PERSUADING DIVERTING	ATTENDING
COMPARING	EXCHANGING INFORM.	
	TAKING INSTRUCTION HELPING SERVING	

(FROM DICTIONARY OF OCCUPATIONAL TITLE, VOL. II)

FIGURE 32

VALUE EVOLUTION (PERRY, KOHLBERG, KEVINGER)

SELF-DIRECTION, BASED ON "GYROSCOPE" OR LARGER VIEW OF LIFE THAN SELF-INTEREST ALONE. CAN USE VALUES TO MAKE CHOICES, NOT DEPENDENT ON EXTERNAL AUTHORITY.

RELATIVISM. AMBIGUITY, NO VALUE CORE TO ALLOW FOR CHOICE, LACK OF INTERNAL DIRECTION, ALL OPTIONS SEEM OF EQUAL WORTH. CONFUSION, OFTEN LEADS TO APATHY, WITHDRAWAL.

AUTHORITARIANISM. ONE WAY TO LOOK AT THE WORLD-THE RIGHT WAY, COMPLETE FAITH IN EXTERNAL AUTHORITY, REFLEXIVE CERTAINTY, HIERARCHY, LOYALTY, STABILITY, ORDER, LOW TOLERANCE FOR AMBIGUITY. NO NEED TO TEST OUT POINTS OF VIEW.

FIGURE 33

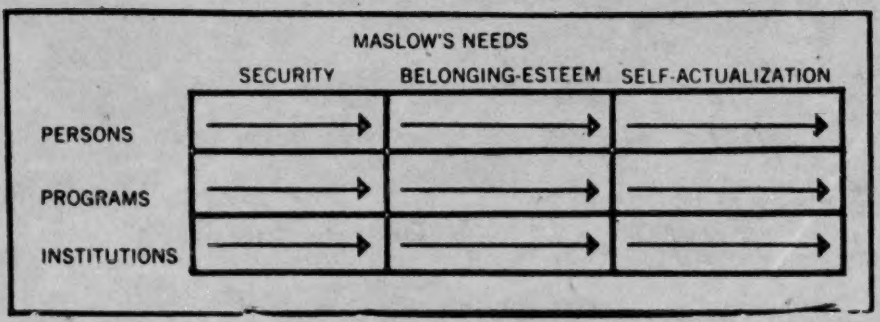


FIGURE 34

ISSUES TO DISCUSS

1) GIVE ADULTS WHAT THEY WANT OR WHAT THEY NEED?
2) HOW TO PREVENT TREND OF NON TRADITIONAL PROGRAMS MOVING TO GRADUATE LEVEL?
3) HOW TO DEVELOP PROGRAMS THAT CAN SHIFT AS DEMAND SHIFTS?
4) HOW TO DEVELOP PROGRAMS THAT CAN CROSS STATE BOUNDARIES? (U.M.A.)
5) HOW TO MEET WIDE RANGE OF STAGES OF ADULT DEVELOPMENT IN CLASS AGED 18-72?
6) SHOULD QUOTAS BE SET UP ON MIDDLE CLASS STUDENTS? SHOULD LOWER CLASS STUDENTS BE ACTIVELY RECRUITED TO GET THE "RIGHT" MIX?
7) CAN WE DELIVER SUBSTITUTES FOR RESIDENCE? (PEER GROUP MEETINGS, WEEKEND RETREATS, PHONE CONVERSATIONS OF GROUPS, SOCIAL EVENTS)
8) CAN WE LEARN TO DEAL WITH THE PERSON WHO HAS NO COLLEGE AT ALL? (HOW TO BUILD UP SKILLS AND CONFIDENCE?)
9) MANY OF THE "NEW" NEW LEARNERS ARE <u>EXCELLENT</u> TALKERS BUT POOR WRITERS. MUST WE MAKE THEM LEARN TO WRITE MIDDLE CLASS ACADEMIC PROSE?
10) WHAT NEW KINDS OF COUNSELING PROGRAMS WILL BE NEEDED FOR LIFELONG LEARNING?
11) SHOULD WE MEASURE THE ATTAINMENT OF CREDIT HOURS OR COMPETENCIES?

FIGURE 35

CAMPUS ENVIRONMENTS CHARTS:

1) INTELLECTUAL (STUDENT AS APPRENTICE SCHOLAR)
2) VOCATIONAL (STUDENT AS FUTURE WORKER- NOT COLLEAGUE)
3) PROTECTIVE (STUDENT IS TO BE INSULATED FROM EVIL, BOTH WITHIN AND WITHOUT)
4) EXPRESSIVE (STUDENT IS TO BE FREE TO EXPLORE LIMITS BY TRYING)
5) COLLEGIATE (STUDENT IS TO LEARN TO MAKE FRIENDS, SOCIAL LIFE IS MAJOR COMPONENT OF "CURRICULUM")

WHERE DOES <u>YOUR</u> INSTITUTION FIT?

FIGURE 36

YOUR CAMPUS <u>WILL</u> SURVIVE IF YOU HAVE

1) CLEARLY FOCUSED MISSION.
2) PROGRAMS THAT CLEARLY REFLECT THE MISSION AND "ADD UP" TO IT.
3) SOME LIMIT TO STUDENT DIVERSITY (NEEDED FOR CAMPUS "COMMUNITY").
4) COOPERATIVE RELATIONSHIPS WITH OTHER INSTITUTIONS.
5) MEASURES OF COST-EFFECTIVENESS THAT RELATE TO 1 AND 2 ABOVE.
6) DISPERSED LEADERSHIP PATTERNS (TRUSTEES, FACULTY, STUDENTS, ADMINISTRATION, OTHERS).
7) STANDARDS OF PERFORMANCE PLUS A <u>VARIETY</u> OF WAYS OF MEETING AND PREPARING FOR STANDARDS STRUCTURES THAT FACILITATE 1-7 ABOVE.

SCIENCE WORKSHOP

Marvin Druger
Professor of Biology and Science Education, Syracuse University

Dr. Marvin Druger has taught biology courses in the Syracuse Independent Study Degree Program for several years. Besides helping to shape non-traditional science courses for use in the Syracuse program, Dr. Druger has also been involved in the development of biology programs for secondary schools.

SCIENCE WORKSHOP

Marvin Druger
Professor of Biology and Science Education, Syracuse University

In his workshop focused on the packaging of science courses for adult learners, Marvin Druger began by characterizing the adult student. Dr. Druger's experience has shown that adult learners are: (1) very heterogenous in terms of ages and backgrounds, (2) highly motivated, (3) receptive to faculty effort, (4) resourceful in that they can find solutions to problems, (5) lack confidence and often need counseling. In working with adults it is important to realize that deadlines are very important and help give the adult learner short range tangible goals. Deadlines must be flexible to meet individual needs. If a student can't meet a deadline then he or she should write a letter of explanation.

In packaging home science courses the professor must accomodate the home life requirements and problems of his or her students. Often times the initial reaction of an adult learner to home science courses is negative; many change their attitude, although some do not finish.

Dr. Druger has found that his students are very receptive to lab work, write good papers, and dislike exams. In his courses, students are expected to write formal lab reports ranging from four to five pages, answer the questions for each assignment, and take the final examination consisting of 50 multiple choice questions.

The following is an example of the course outlines used in the Syracuse ISDP for science courses:

ISDP ASSIGNMENTS
BIOLOGY II - 250
SUMMER TRIMESTER
MAY - AUGUST 1975

1. Send all assignments to: Dr. Marvin Druger
800 Biological Research Labs
Syracuse University
Syracuse, New York 13210

2. Reading and Written Assignments
The required books for ISDP 250 are:
Druger, M. Individualized Biology-Part Two
Wallace, B. Essays in Social Biology-Vol. II. Genetics, Evolution, Race, Radiation
Odlaug, T. - Laboratory Anatomy of the Fetal Pig (W. C. Brown, Publishers)

3. The main thrust of Biology 250 will be to provide insights into how organisms are suited for living in their environment, both structurally and functionally. The main core of the course is taught via audio tapes. Individualized Biology provides a guide source to be used in conjunction with the tapes. A supplementary text may be useful, but there will be no readings assigned in the text. Keeton's Biological Science is recommended. The audio tapes will deal with three blocks of subject matter: genetics; plant structure and function; animal structure and function.

4. The Wallace book is intended to help you integrate the biology of organisms with social and moral problems. There are four main sections to the book. During the trimester, you should read the book in its entirety. We want you to construct an essay on each main section that will tie together some of the major ideas in the separate essays of that section. You should also add your own insights and knowled so as to produce a brilliant synthesis of ideas and information worthy of publication.

5. Laboratory Work: - Some laboratory work will be done in class. The major home assignment involving lab work will be the dissection of the fetal pig. As a check on your dissection, we will ask you to submit fetal parts immersed in your favorite alcoholic brew. A series of audio tapes will provide background information about mammalian physiology. Also, we will ask you to answer some written questions about the pig as part of your assignment.

ASSIGNMENT I - DUE JUNE 10

1. Tapes 14, 15 and 16 (Genetics)
2. Answer the following questions in Individualized Biology and submit them:
p. 3 # 2, 4, 7
p. 13 # 5, 8
p. 41 # 1, 6, 7
3. Also answer the Self-Quiz questions at the end of each section., and check your answers with the answer key. Do not send us the answers to the self-quizzes.
4. Wallace paper # I due. i.e.; a brilliant essay on a main section of the book.

ASSIGNMENT II - DUE JULY 10

1. Tapes 20 and 21 (Plant Structure and Function)
2. Answer the following questions in Indiv. Biol. and submit them:
p. 109 # 1, 5, 8, 3, 12
p. 139 # 4, 7, 8, 9, 10, 13, 16
3. Wallace paper # II due: another brilliant essay on a main section of the book.

ASSIGNMENT III - DUE AGUST 10

1. Tapes 23, 24, 25, 26 (Mammalian structure and function)
2. Answer the following questions in Indiv. Biol. and submit them:
   p. 193 # 1, 3, 5, 9, 12, 14, 19, 21, 23, 26
   p. 207 # 2, 7, 9, 12, 13, 14, 16, 18,20
   p. 225 # 1, 2, 8, 10, 13, 15
   p. 239 # 2, 3, 7, 10, 16, 17
3. Wallace paper # III: a third brilliant essay on a main section of the book
4. Fetal Pig Assignment:
   A. What structures are present in your fetal pig that are not present in the adult? What are the prenatal functions of these structures?
   B. Name ten organs that you observed in the dissection and state their function.
   C. What major diagnostic features separate the mammals from the reptiles?
   D. Pretend you are a blood cell in the kidney of an adult pig. Trace the pathway (naming major blood vessels and structures) that you must follow in order to reach the dorsal aorta.
   E. SEND US THE FOLLOWING STRUCTURES IN LABELLED VIALS:
      # 1 : TRACHEA AND PIECE OF LUNG
      # 2 : GALL BLADDER AND PIECE OF DIAPHRAGM
      # 3 : CAECUM AND PIECE OF DORSAL AORTA
      # 4 : OVARY OR TESTIS AND KIDNEY
      # 5 : SPLEEN AND LENS OF EYE
      # 6 : URINARY BLADDER AND PANCREAS

The final exam will be held in August. At that time, all tapes, dissecting equipment, dissection manual must be returned.

IF I HAD COLLEGE TEACHING TO DO OVER

John A. Valentine
College Entrance Examination Board

John A. Valentine, of the College Entrance Examination Board, was formerly Executive Director of the Carnegie Commission on Non-Traditional Study. Dr. Valentine taught psychology at Middleberry College in Vermont. He is author of the article, "The Liberal Arts College and the Experienced Learner," which appeared in the College Board Review (Fall, 1974).

IF I HAD COLLEGE TEACHING TO DO OVER

John A. Valentine
College Entrance Examination Board

I have two things in mind, namely two parts. Part one, I'm going to read to you some excerpts from a paper I wrote on a topic which you see announced in your program, "If I Had College Teaching to Do Over Again." It is simply a fact that the experience of working with that Commission on Non-Traditional Studies, becoming aware of all the things the commission was looking into, "blew my mind" so to speak. And one of the things that did keep happening is that I found myself thinking back to what I was like when I was a college teacher in Middleberry College for a period of about eight years; and how differently I was looking at colleges and college teaching now that I am back on the Commission of Non-Traditional Studies. And so to get it out of my system I wrote this thing, "If I Had College Teaching to Do Over." I apologize for some of it in the sense that it is personal. The second part of what I would like to do is cease being personal and take a look at the future as best as I can.

The Commission on Non-Traditional Study did not hold that non-traditional approaches to teaching and learning were necessarily "newer" or necessarily "better" than traditional approaches. They recognized the difficulty, indeed the impossibility of making distinctions between what is traditional and what is not that would be either defensible in logical terms or useful in practical terms. They accepted the term "non-traditional" as simply a convenient label for a host of developments and possibilities in post-secondary education in the early 1970's that seemed to those engaged or interested in them to represent significant departures from habitual ways

of going about education. The Commission did make an effort to describe the attitude that sparked many of the departures. In Dr. Gould's words it was an attitude that "puts the student first and the institution second, concentrates more on the student's need than the institution's convenience, encourages diversity of individual opportunity rather than uniform prescription and deemphasizes time, space, and even course requirements and credits in favor of competence, and, where applicable, performance."

This attitude the Commission felt to be important if many people not well served by existing educational institutions and arrangements were to become served. They were ready to acknowledge that some learners do respond well to existing arrangements, however "traditional" they might be. It was the people "left out," so to speak, who concerned them.

Now, that phrase "puts the student first" began to bug me in a personal and emotional as well as a detached and intellectual way. I found myself wondering whether I had put students first during my teaching days. The first obvious thing that occurred to me was that I had certainly been more conscious of and attentive to some students than others. The bright, able students who showed interest in what I was teaching, performed well on my examinations, and went on to major in my field -- perhaps going on from there to graduate school -- these were the students I paid attention to. They are the ones I am still able to recall. There were times spent with them, in and out of class, when I believe I influenced definitely and positively the course of their learning.

As for the great majority of students who took my courses, however, I have no idea whether anything I said or did affected their learning past the point of coping with my examinations, although I did become acquainted with some of them in a friendly

sort of way. A few students turned to me for help with personal problems, and I did what I could for them, as an older friend.

So my case for putting students I taught at the forefront rests on a very small percentage of the students I had occasion to teach. That never bothered me in the least then, but it bothers me now. Why wasn't I as concerned about students who were least interested and least able as I was about those most interested and most able? I suspect at the root of it I took for granted that my responsibility was to teach a course that would be approved by my fellow psychologists; what and how much students were able to make of my course was up to them. I wish I had been there to ask myself several questions about this attitude I had.

The most basic question would be, why was I teaching the course? "Because it's there" I suspect would have been one honest answer. More specifically, "because it's in the catalog, which means it must have been approved by the curriculum committee." Perhaps the reasons given for it when it was presented to the curriculum committee could have been given, and these I expect would have to do with the significance of the subject-matter in the discipline to which it belonged, or its necessity in terms of some sort of requirement. If it was a course I wanted to teach and had somehow managed to get into the curriculum, I suspect the real reason would be just that -- that I wanted to teach it.

Somebody on the faculty presumably wanted to teach each of the courses that were offered. I am sure the reasons in most cases included some anticipation that the course would be useful or of value to at least some students. I am now inclined to wonder, however, if the thinking and motivation that led to the offering of most courses was so dominated by

the preoccupations of professors with their various disciplines, and with their personal interest and stake in their disciplines, that what the course would actually mean to students or do for them received relatively little serious consideration. I would not be surprised if all but a few of the students who registered for my courses would have profited far more from learning something other than what I presumed to expose them to. I don't know, of course, because I never bothered to even think about the possibility, much less explore it.

But even if one of the courses I taught happened by chance or design to embody ideas, information and skills that could be shown to be of great, enduring value to almost all of the enrolled students, I would still now have concerns about my performance as a professor. These concerns relate to the how rather than the what of my teaching.

I am more conscious now than I was back then of the substantial difference between the point of view implied when one says "I taught them but they did not learn" and that implied when one says "they did not learn, so I must not have taught them." It has taken me a long time to realize that learning and not teaching is what education is about. The most refreshing means of arriving at this realization for me has simply been, from time to time, observing my own learning or reflecting back on when I learned in school or college. Learning that "sticks" as opposed to the "here today - gone tomorrow" type of variety seems to occur only when there is a genuine readiness for it; when it is needed to close some gap, reduce some tension in one's own unique special universe. The gaps are closed and tensions are lessened at odd times of the day or night, not necessarily in a classroom or reading a textbook that is assigned. And the resources used to close these gaps are incredible in their diversity: a printed word, a spoken word, sights and sounds, facts and figures, fantasies,

frequently other people; but not usually in my experience, when other people consciously think that they are teaching them.

People, of course are able to help other people learn. There is that magic moment for the teacher when he just happens to close the gap for the student. But nudging, seducing, or encouraging someone to learn is a clear, more subtle process than I think we realize or want to acknowledge because it makes a mockery of too much of what we do in our role as teachers.

It is my impression that I managed reasonably well in helping the students I favored, partly because of their interest in me and in my subject, to proceed with the learning they were already inclined toward. I had sufficient exchanges with them to size up what they knew and did not know, what they wanted to know and needed to know. Since the knowledge in question was in my own special field, I was naturally familiar with sources of learning they could benefit from. It came about spontaneously that I was aware of and responsive to questions on their minds about how their study of psychology tied in with or interfered with their personal lives and plans. They were experiencing the "traditional" system of education at its best, in a sense, just as I feel I did when an undergraduate at a traditional university.

One key was an affinity between student and teacher in terms of disposition and interest. Another key, to be sure, was time, time for us to communicate with one another. More about that later. Another key was resources -- books and periodicals in the library, for example.

But what of all the other students who turned up in my classes? I remember so little about them now -- I knew them then so slightly if at all -- I must fall back on guesses and speculation, which do lead me nevertheless to certain firm impressions.

It seems clear to me that I treated them too much as a group and too little as individuals. Although as a psychologist I was aware of and even a bit knowledgeable about the extraordinary differences among individuals, I largely ignored these as I went about my teaching (although to be sure I willingly took advantage of them in my testing and grading).

I totally ignored the possibility that some students already knew a large part of what I was set to teach them-- perhaps more than I planned to teach them. It is a fact that students would occasionally come up to me after the first class and report having studied psychology in high school, sometimes from a text book more demanding than the one I was using. Although I am sure I expressed some sort of interest, it did not occur to me to find out how much they had learned, and to consider seriously suggesting or making other arrangements that would be more appropriate for them than just sitting through my course. Similarly, it did not occur to me that I might do something about the fact that they differed in the amounts of learning they were capable of and in their rates of learning. In other words, it occured to me that why didn't I, after a week or two, give some of them a chance to pass out of the course in terms of how I defined the course.

Although I usually included a term paper or project in my courses, I now sense I was poverty-stricken in the suggestions and advice I would give to individual students. For one thing I tended to stay so close to "my" subject, and what "I" knew about it that the student and I were quickly in a narrow orbit which excluded much consideration of questions that might have been more vital to him or her, or to me for that matter.

For another thing, I was abysmally ignorant of materials,

facilities and experiences for learning that I suspect now must have been all around us, on the campus, in the local community, or in some other place that was accessible.

Although aware of what the college said in the catalog about its broad educational aims -- to develop abilities to reason critically and independently, to make judgments wisely, to communicate effectively -- I placed so much emphasis on the information I felt each student needed to assimilate about my subject that I am afraid I mostly just hoped that these larger aims would somehow mysteriously also be fulfilled.

In the classroom itself, where most of our teaching/learning time was spent, I was a rank amateur when it came to using group processes creatively and productively. I mostly stood up there and talked; while they listened; we sometimes "discussed," in a way that engaged and possibly enlightened a few; I seldom arranged settings and tasks that might have provided a bundle of individual insights and some that could be shared.

I was somewhat of a nut even then about testing and educational measurement, so I probably went about that more competently than I did other aspects of my "teacher" role, and more competently perhaps than many of my colleagues in other disciplines. But even in this area I tend to feel now that I was too concerned about the information students acquired about my subject, and too little concerned about what they were learning that might be of significance to them, then and later, including "the ability to reason" and all those other outcomes proclaimed in the catalog.

Now, would I change if I were to become a college teacher again? I am more sure that I would be critical of the way I performed the role, and of the role itself, than I am of the

prospect of changing in any substantial way my actual performance. It was a pleasant life, just the way it was, with many inducements not to pay too close attention to the learning taking place in the lives of more than a handful of students. I might be too old now, the old habits might assert themselves with too much force, the institutional and social pressures upon me might be too great, for me to change all that much. But I am sure I would want to change, and would make an effort.

So there's my personal testimonial. Now let's quickly change gears and turn to the future in a somewhat more detached way.

About those population trends, Bud Hodgkinson brought up last night, they simply are dramatic; there's no way to escape without saying that. That one transparency that showed the 18 to 21-year-olds total, the period from 1976 to 1980 there's that very slow increase peaking at sixteen million, there abouts, from the best I could read the transparency. In 1990, it shows twelve million young men and women, from 18 to 21, and as he says, "That's not speculation. That's fact. They're already on the scene, only a lot younger." That's a 25% decrease in the traditional college-age group. That's an extraordinary decrease in terms of a population of people. In that twelve million there will be a larger percentage of minorities than there is in the population today. In 1965, for example, black 18-year-olds, 12%; in 1985 they will be 18% of the age group. Now, at the same time that this radical decrease is occuring in the percentage of the college-age going group, the percentage of older students, age 25 - 35, is increasing.

Other trends, possible trends.... Another trend is the declining economic value of college degrees; this will have

some bearing on the future enrollment trends of our colleges. Another trend I find people not paying to much attention to is this anticipation that we are moving towards attitudes of lifelong learning. I was very interested when Bud Hodgkinson said last night, that Senator Mondale has proposed legislation to promote the Lifelong Learning Act. One thing to consider is: What will be the impact of the attitudes of Lifelong Learning on the traditional college going age group? Because if lifelong learning becomes more of an accepted thing, then I would think it would mean for high school graduates more flexibility in terms of "Well, I don't really need to go to college NOW. I can do that kind of thing later on."

Well, what are some of the implications of these trends for colleges? We see a lot of predictions being made today that some colleges will probably not change all that much; that there are some colleges that are simply maintaining their selectivity and perhaps the prestige that they have in the eyes of the public will continue. That seems likely to me. There will probably be many colleges merging or closing. That also seems likely to many people who are making forecasts. There will be some colleges, no doubt, that will change substantially enough that they will continue to survive and flourish perhaps, but in a manner somewhat different than they are today; that it will be hard to see them as the same colleges.

The one thing that will probably happen at some of these colleges that change is that the proportion of older adult students in their base will increase tremendously. So that instead of having a base of traditional college-age students and then some part-time adult students, they will have more part-time adult students with fewer full-time residential students. What are some of the implications of that? Well, one implication has to do with the work load of the faculty.

I'd like to suggest this to you, that right now, the arrangement at a college, that is a residential college, assumes full-time students therefore paying a full tuition and a full-time faculty. The full-time student body provides largely the economic base for the full-time faculty, and provides the base for shaping the workload for that faculty as far as teaching is concerned. Now let's think about a situation in which the majority of the students will be part-time older students; part-time just out of the reality that for most adults it's not realistic that they are going to be full-time. But the part-time adult student puts more demands on the faculty than the current full-time students do. That's just guess work on my part. What I'm thinking of is the nature of a college where the students are full-time is actually, from the experience of the students, that they are not full-time students. They're doing lots of other things besides taking their courses. And in the case of part-time adults, however, although they're part-time, and they're just coming in and out, the chances are that they are going to want to have closer contact with the faculty members than present full-time students tend to do. There is simply, I think, in too many colleges this attitude: "If you don't bother me too much, I won't bother you too much," between the students and the faculty. And I don't think that's going to be too likely with part-time adults coming to get something that they want.

We're not talking in terms of only increasing the total teaching workload, but also the nature of the workload; an increased emphasis on teaching, yes, but teaching in an entirely different mode. A different mode, and that's my guess how some of these institutions will change if they are going to survive. Much more emphasis on an advisory kind of role with students, where the professor dealing with the student does not take on the responsibility of teaching that student

always what he wants to learn, but guides the student towards some other resources including some other persons, including some person who is not on the faculty, who is going to be the one who is going to help the students learn what that student at that time wants to know. Advising, brokering, in the sense of how I described it, "managing individual learning processes," that is not a very graceful phrase, but I think it comes much closer than "teaching" to what is going to be the case.

Now involved in the management of traditional processes of learning and the new processes of learning, I think it is reasonable to guess that there will be increased use of technology or the familiarity of the professor with technology. The brokering, incidently, requires a new range of knowledge and information on the part of the professor in terms of what is accessible to the student besides himself or herself. And there then will be evaluation of student competencies. By this I have a question mark because another hunch I have is that more of the final summative evaluations should be made by people external of those who have guided the student's learning. That is not characteristic of American education; it is characteristic of English education. I have an idea that there may be things that will bring about an emphasis on external final judgments of the students and less of the faculty member playing the role of the one to guide the student and also to judge his learning.

Through all these new activities, advising, brokering, managing of learning, evaluating student competencies, are the necessary skills of diagnosing and assessing of where students are, right from the beginning and right through the course of the student's learning. Now it occurred to me last night when we were listening to Bud Hodgkinson, that a splitting off has got to occur between those judgments of student competence that are in the public interest from those judgments that are made to help the student learn

more. It seems odd to me that we throw these things into such a dichotomy; the traditional grading system, or you chuck it and go into this meritorious system of evaluation. Now, I think it's obvious that we need both processes going on. We have the professor always quite conscious as is the student of whether the evaluation is taking place in terms of the student's own progress and learning or whether, with the public looking on, of what does the student finally know, or what can the student finally do.

Well, while we are here, I want to say a word or two about credit. To be honest with you, I'll say first of all that I feel credit is openly defensible in higher education as a measure of student achievement, but at the same time I say that, I cannot see any way in which how many numbers of credits a student has gotten has much to do or say about how much he really knows or doesn't know. And at the same time I'll say that I am convinced that credit is not going to go away. It is so enmeshed in every thing about higher education; enmeshed not only in evaluation but also in managing, and financial arrangements; it's like an octopus; it's everywhere. One reason that it's not going to go away is that for the time being at least, it still provides the one stable measuring mechanism whereby an increasingly mobile student body can move from one institution to another. We just don't have any other satisfactory means right now. You're involved in things like CAEL, assessment of experiential learning, there is the problem of translating this experiential learning into traditional credit. It sounds like a nonsense thing to me but it's going to stay there and has to be done to some extent.

I think you should be aware of the future probable roles of faculty members in being conscious of other tracks towards credit as well as the normal classroom rating thing

and the experiential learning. Mostly what I'm trying to get at is another track towards credit, one of the one's that's coming along fast out of the ACE Commission on Educational Credit has to do with the accreditation of formal courses. You know that business that started after World War II with the accrediting of service-related courses and recommendations made to colleges regarding those courses. Now, that has expended to non-collegiate courses that are not service related but are offered by industry and business. ACE is going like wild fire on the assessment of all kinds of courses that are being offered by IBM, GE, and whatnot, with recommendations coming to colleges as to how much credit should be offered for them. The Commission on Education and Credit created a task force on educational credit. The Task Force is going to start with the assumption that four of the tracks of credit are, in their own way, justifiable, although the basis for justification is different in each case. The four tracks of credit will be: credit that comes about as grades that are assigned by faculty; credits that come about as a result of standardized tests; credits that come about from recommendations from ACE regarding formal courses that are offered in the military, or in business, industry, etc.; or credit that comes about from the assessment of experiential learning.

Now, about credits from grading, I suspect that in these new roles to be played by professors, there will be much more sophistication about how to go about the grading process technically and also how to go about grading more judiciously and fairly. I would just like to share with you something. I had the chance to read a manuscript, written by a man who is very upset at the grading that is going on at colleges. In fact, he holds that there are grading malpractices. He wanted to get some actual facts on this and what he did was to find some institutions that had ombudsmen, and then he went

to these ombudsmen and asked, "Do you have any grievances coming your way from students regarding grading?" And it turned out that he came up with a large number of things and he began looking up case studies that were not fictitious but were actual. Let me read a couple to you:

Case One. A freshman who had performed adequately throughout a course, and had a C average on all the tests, received a final grade of F. The instructor had explained that the student had exhibited an improper spirit towards the subject matter and refused to alter the grade.

Case Two. In a foreign language course containing students who had lived abroad, graduate students working toward foreign language exams, and students who were simply beginners, one error on an exam reduced the grade to a B, two errors to a C, and so on. Many responsible and scholarly students who had maintained A's in other courses, received C's and D's in this course.

Case Three. A female student was informed by a professor that "women do not belong in my field." Her grade for the course was significantly below the average she had maintained. The problem was rectified through the assistance of the department chairman.

To come back now, full circle, to "If I Had College Teaching to Do Over," Part I is personally how I differently would want to go back if I had a chance to; Part II is this presumptuous thing of how I would like to see College Teaching as a profession change.

I was reading this AAUP thing, and Joe Duffey whom I have a lot of respect for, has a piece in it that some of you probably have read, and he comes to this thing about "To Whom

are We Accountable as Faculty?"

> That we are being reminded as our utter professions of insistent new demands for accountability, to whom are we accountable as teachers? First, we are accountable to our profession and to our field of knowledge. Second, the spiral which made our predicament clear, we are accountable to constituencies, employers, politicians, students, parents.

In my own view, I think students need to be first, far closer towards the forefront of that notion that professors have of their whole responsibility. Now, getting back to myself as a professor, I guess I learned a lot of things about what we do. The important thing is how do we answer the question, "Who am I?" Whenever asked "Who am I?" I always answered "I'm a psychologist." I am now suggesting in a sense, that the answer that is going to be far more workable, if some colleges are going to survive, and if some of the professors are going to continue to have a satisfying career in college teaching, the answer to the question "Who am I?" will probably still be "I am a chemist," or "I am a sociologist," but it will have this added on to it, "I am a psychologist who is skillful in helping other persons learn what they are motivated to learn and are capable of learning." And if there are members of our faculties on colleges in this country who can say that and it will be true, then I think the chances for survival and success will be that much greater. That's it. Thank you.

A PERSONALIZED ACCOUNT OF THE ADULT LEARNER

Mari Jeanne Egan
Graduate of the University of Oklahoma's BLS Program

Mari Jeanne Egan is a graduate of the University of Oklahoma's BLS program from where she has received her B.A. and M.A. in Liberal Studies. She is presently a doctoral candidate in adult developmental psychology at Ohio State University. Ms. Egan offers an unique account of the experiences of an adult learner in a non- traditional study program.

A PERSONALIZED ACCOUNT OF THE ADULT LEARNER

Mari Jeanne Egan
Graduate of the University of Oklahoma's BLS Program

About eight years ago, I was confronted by a dilemma, which is becoming more and more common in the U.S. I had been married for a number of years, and I had been a full-time housewife; I enjoyed cooking, sewing, chauferring, doing all kinds of tasks that are included in the job description; if the average housewife would be paid, she would be making about $13,000 - $14,000 annually. My marriage, all of a sudden, was on the rocks, and I was faced by the fact that not only was I loosing the center of my universe, but I was also loosing a lot of stuff, because I had no means of perpetuating the kind of life that I had been leading. So, I began scurrying about looking for other alternatives; I was concerned about finances, because I had three children to support. I began looking for a job, but they all had that inevitable section "job experience." I didn't have anything that was really marketable at that time.

I had one skill that I had acquired being married to a sales manager in a large corporation; I picked up some sales ability so I sold myself into a secretarial position. I set a five year plan; this was the year of the five year plan for Nikita Kruschev too. I decided that the first thing to do was to develop a secretarial skill, so I looked into a program to develop shorthand and all those good things. I enrolled in two courses and this pacified my boss. The first three months I had to bluff a lot, but I accomplished the work by staying very late and coming in very early. At this point, I decided that this was really no way to live. I was

meeting my financial obligation to the children, but I really had no future objectives and I think that this is the most devastating portion of the vacuum that comes after a divorce; the wife is usually involved in the husband's activities and has really no activities of her own.

At that point I began trying to decide what to do, exactly where I wanted to go. If I wanted to go somewhere, if I wanted to develop a career, it would be necessary to go to college. I enrolled in night school; that was a disaster! I worked long hours and by that time my boss had promoted me to assistant PR manager. I was working long hours, sometimes until midnight, to get the paper out. After the two sessions, I dropped out because there was just no way of attending. And as serendipity would have it, that very week, one of the vice-presidents in the association stopped in to say, "hi." I told him about dropping out of college and he told me about a program that was designed for people just like me. At that time I was just a little threatened; I just got out of one program, and I wasn't quite ready to start another. But Bob Judd, who was one of the consultants who helped develop the BLS program, kept sending me Christmas cards asking me, "Are you enrolled yet?" He didn't wait for an answer but sent me one of his brochures. After the second time of looking at the program, and after my financial situation looked up a little bit, I finally got the courage to send my $50.00 admission fee, after which I received the placement tests. About that time I changed jobs, and in working for this consulting firm, I decided that I was going to be the first woman vice-president. In order to do that it was necessary to have a master's degree. And with the goals of becoming rich and famous in the business world, I enrolled in the BLS program.

Three years later when I finished the BLS program, I found, all of a sudden, that the objectives that I had been working

for and which were becoming closer and closer, were valueless. What I wanted was to know a bit more about who I was, and what I wanted than what other people in my world thought was valuable. So from a materialistic kind of person, I became very idealistic, and enrolled in graduate school at the University of Oklahoma. I dropped from a $14,000 a year salary to $266.66 a month; that's how realistic I was! And after three years as a graduate student, I'm getting a little bit more realistic and I'm looking forward to the point in my life when I can increase my income somewhat.

Last night, you heard a faculty perspective on the University of Syracuse which is very similar to the program at Oklahoma in many ways. But this morning I will attempt to relay to you some of my impressions as a BLS student. You must try to understand that some of my impressions have been contaminated to some extent by virtue of my studies in psychology; things look different in retrospect.

The program at Oklahoma was launched in 1961 with 75 students and today it has a program of about 1200 - 1400 students. It was originally only one degree program, one direction, and today it has grown to a virtual department store of career opportunities and opportunities for personal growth. The Bachelor of Liberal Studies program is equivalent to a four year college degree. In it there are four areas: Natural Sciences, Social Sciences, Humanities and an Inter-area. This was a program that the college devoted itself to for six years; then it gradually moved out to a Master of Liberal Studies program. In 1973, a junior college program was also initiated.

One of the strengths of the BLS program is that the program is arranged around education by objective, not just education by course objectives, but education by total objective.

At the beginning of each student's program, the student is advised what they are trying to do and when so that they can measure their progress and have interaction with their adviser.

The first objective of the program is a knowledge of humanities, natural sciences and social sciences with sufficient depth and breadth, in order to understand the relationship from a broader range of knowledge. The second objective is the understanding of the student's own personality, problems, and potential. The third objective is a better understanding of the student's own culture and temporary problems. The fourth objective is the understanding of man's historical development. The fifth objective is the understanding of direction and effect of political and psychological change. The sixth objective is the understanding of some of the great literary works and other works of art. These objectives are really essential, in terms of giving the student direction.

The theme of the BLS program is "The Central Problems of Man in the 20th Century." In order to pursue a liberal education, the program is arranged around central problems and learnings. There are approximately 130 books on the reading list; only a small proportion are core books, the rest of them are individually assigned. This gives most of the responsibility, of the program, to the faculty adviser.

There are basically seven steps for completion of the Bachelor of Liberal Studies Degree:

(1) Admission, placement and advisement is a step which has many uses. Primary is the evaluation of what and where the student is in terms of various experiences and knowledge. There is no formal credit given for past studies or past experiences. In the Consortium, your program of portfolio assessment offers some kind of formal recognition to give the

student an idea of where he or she is at and how much work they have to do. One of the weaknesses of the BLS program is that a student who is presently working in social sciences is told that they will probably design his courses so that he can receive his degree sooner. With this type of system, the student is not really quite sure where he is at or where he ought to be. For the program to be strengthened, Oklahoma will definitely have to look at more definite kinds of criteria.

(2) An Area of Independent Study. In the BLS program, the drop-out rate is very low. Approximately 39% of those enrolled in the BLS program in the first ten years have dropped out. This is considerably below the 47% of traditional college students. However, it becomes a very interesting statistic when we find that 91% of the people who dropped out of this program did so before they completed the first area. Here I think we need to look at a psychological study. People are very concerned about failure until they actually have a success under their belt and they will find all kinds of excuses why they cannot finish the program. Here again, this area of independent study takes about a year on the average. There is no firm type of reinforcement, during this year. The only reinforcement given to the student is by his or her adviser. Now you consider the strength of the student's motivation and the student's reinforcement as directly based on this relationship; as in all relationships some are successful and some are not. So if the student is in the position of needing help and if the right person is there to help him he will probably succeed. In the area of independent study the best policy that a college or university can adopt is: reinforcement. But even before that, if a student is encouraged to take courses where he or she has a high rate of competency, they can and they will succeed, they will feel confident. In the case of one of the students in the BLS program, when he entered the

program he was faced with many of the problems of the students of the past and was very uptight; he was advised to go into one of the humanities areas where he excelled. He was a fantastic journalist! Not only did he excell in his own area, but by the time he got to the natural sciences, he was convinced that he gained much of his education before he ever walked through the door of the university. I think that if he would have entered into the natural sciences first, he would have dropped out in the first six months. The best way to reinforce is to encourage the students when they do well.

(3) After the student completes the Independent Study, he or she then takes the comprehensive exam. Now this is the only criteria used to evaluate the student for six months to two or three years. These comprehensive exams are usually about 200 multiple choice questions and four essay questions. The essay questions usually take about 30 minutes each, and the rest of the test usually takes about four hours. There are three grades which are given: satisfactory, unsatisfactory, or needs improvement. Now, if "needs improvement" is the grade given, then the student is asked to restudy material and submit assignments in areas which appear to be weak points. If a student is a borderline case, he's not asked to do another area of comprehensive. It's considered sufficient that he or she completes assignments to demonstrate competence rather than going through the test again.

(4) After the three steps of Advisement, Independent Study, and Comprehensive, or if the student feels that he or she is competent enough, then the student takes the Area Seminar. Now, this is one of the most unique aspects of the whole program, and one in which I feel I did a great deal and which interested me the most. There is a period of 14 weeks residence required; three weeks for each area and then four weeks seminar for the inter-area. During these three

weeks the students attend daily classes with usually 15 to 24 others. The days are very long, usually eight hours of classes a day. Because this was inter-disciplinary, the courses were usually team taught by two profs from varying areas. During these seminars there is an experience which is unnerving for every student who hasn't attended college. And here again is an area where the BLS program is weak. There were no formal kinds of pamphlets distributed, courses offered, or instruction for the research paper which was required in the seminar; we were just told that we had to write a research paper. No direction was given; at the library it was chaos trying to find our way around, and I think that some of us are still wandering around there even this year. If I were offering suggestions to the BLS, that would be one of them; some kind of guidance as to how to write a paper would alleviate some of the anxiety of the person wondering how to write a paper.

The second aspect of the BLS seminar which I think is extremely important is that of associating with other students. And this is one of the things that I am concerned about with your program, with the kind of thing you're developing. An adult in a college program, somehow feels like a fish out of water. There are all kinds of problems experienced by adults which are not experienced by traditional age college students. In the evening there were probably about six or seven people who would exchange what had happened to them in the last year; how horrible it was writing a research paper. It was nice to learn that one was not incompetent; that you were all incompetent. I think that it is very important in dealing with adults to arrange interaction with other adult learners.

(5) After the student completes the seminar, then the next area seminar is open and the student goes through the process of social sciences, natural sciences, and humanities.

(6) And after that point, the student begins two things consecutively: One, the inner-area of study where everything the student has learned is integrated; twelve critiques are required of very major kinds of books. And, two, a mini master's thesis; some kind of creative work in literature, the arts, or affiliated with the person's work. The choice of topics is very flexible, but the student must show the relativity of the studies and also has to demonstrate the proficiency that he or she has attained. The study usually takes about six months to write and the student is expected to use his or her own library. BLS students are scattered all over the U.S. and many foreign countries. To insure the availability of some books, the college does loan the basic books to the student. This was a nice feature because in all I think I used about 60 books; the cost would have been exorbitant.

(7) After the Area Study in Depth, and the Inner-Study Area, the students take THE examination. Now this is equivalent of a senior comp. It is also quite similar to the general examinations; there are only four essay questions which must be answered within the eight hour time limit. In the end the essays are sent to a committee of three professors. The student is then named as a candidate for a Bachelor of Liberal Studies Degree. If the student does not do satisfactorily on the final examination, then he or she has to restudy and be retested. The BLS is awarded four times a year, and one advantage of the program is that students can enroll anytime; sometimes adults are very reluctant to enroll in the program and if they become motivated at one point then they can apply right away.

The cost of the program is very low. The cost is only about $20.50 a semester hour. Now, this is the basic cost, it actually figures about $2550 for the entire program. In-

cluding room and board, the program figures about $3500. plus transportation. My transportation ran about $500., bringing the cost of the program up to $4,000.

The Junior College option, in which the course work is half as much, runs about $325. for the tuition, and about $650. for the room and board.

The Master's degree program costs $1600. for the basic program and $650. for the room and board.

Now, I'm sure you're all wondering how the faculty feels about this program. They had a lot of mixed emotions about "Does the program work, do you enjoy doing it?"; it's a mixed thing. There were some professors who liked working with adult students far more than with the traditional age college students, and there are some who did not. At the University of Oklahoma when the program first started, the faculty had mixed emotions: Should we start this program? Will it damage our reputation?

The faculty began volunteering for teaching positions in the BLS program in much the same way as our own faculty volunteers. He or she was advised by a superviser to volunteer. After the first year, the faculty found that "Yes, this was a pretty interesting program." Today there are 95 teaching positions available in the BLS program; there are 800 faculty who are trying to get into that program. It's quite a change from 15 years ago! Faculty members find that they enjoy the seminars particularly because of the people from diverse backgrounds; it's then that you realize that the incoming freshmen of a traditional age are very homogenous. They have all been to high school, some have been to nicer high schools than others in a slightly different region, but basically they have had the same kind of experiences. In an

older group of 20 to 25 people, some of whom are in the American Transportation Industry, some of whom are in Literature, in Communications, some of whom are in the Social Sciences and who have been working for many years — it's very exciting! The students are very respectful toward knowledge; they have to be to be motivated enough to go through the program. Not only are they from diverse backgrounds, but they welcome the challenge of the seminar.

I remember teaching at OSU, I was so scared, thinking on the first day, "What am I going to do if they challenge me?" "What if I'm asked questions that I can't answer?" My fears were unfounded; nobody questioned me. It was so different from the BLS program, that it took me a while to realize that this is the way undergraduate education was at Ohio State. It was much like education in high school, the student would accept what the teacher said. So, it took me quite a while to change my students into non-traditional students.

I've drawn this information on my own resources and on the ten year follow-up study. If this conference was just two months later, I could tell you the 15 year follow-up study, which is being prepared. In the ten year follow-up study of the BLS program, all fifty states were represented and several foreign countries. Over 100 occupations were represented in the study. As we learned last night, and it is true at Oklahoma, the average student was white, middle class, male, thirty-five years old. Three-fourths of the students are between the ages of 31 and 50. However, the oldest graduate was 83 and the youngest 23.

I'll give you a breakdown of ages in terms of enrollment. There were five people under age 21 who enrolled. Now, this was experimental to see if they could enroll traditional

college age students in the BLS program; they found that the answer was "No." The problem was not relating to the adults, the problem was discipline. The younger students did not have the discipline for this type of program. There were 324 people between the ages of 21 and 30 or 12% of the total; 947 persons between the ages of 31 and 40 or 36%; 918 persons between the ages of 41 and 50 or 35%; 366 persons between the ages of 51 and 60 or 14%; and 52 persons between 61 and 70 years of age.

I mentioned the drop-off rate as 31%; this is low considering all the variables involved. One of the reasons the ratio is so low is because of peer pressure. When your employer is paying your way through college it's not likely that you will consider dropping out. The average adult learner has to be highly motivated and in my experience they were. Some of them just came because they wanted to learn, they wanted to know more out of curiosity. But it was more common for students to be in the program looking for financial kinds of rewards. Later on, these students became more and more interested in learning, but this typically came later on.

You're probably wondering how prepared the student is who graduated from the BLS program. Oklahoma administers the Graduate Record Exam in Verbal, Social Sciences, Natural Sciences and the Humanities. In the national reference group of 1971, the mean score of all three combined areas (Social Sciences, Natural Sciences and the Humanities) was 1470; the mean BLS graduate averaged 1680 or 15% above the national average; 78% of the graduates were above the national average. In the Social Sciences the national reference group averaged 490; the BLS student averaged 570 with 77% of the students above the national average. In the Humanities, the national reference group averaged 530; the BLS student averaged 550, slightly above the Humanities majors. In the Natural Sciences, the national reference group averaged 490; the BLS student 570.

Another way to check the BLS program was to contact universities where BLS graduates were graduate students. In 1971, two BLS students received PH.D.'s, one in English and the other in Philosophy; five others were in the process of completing a doctorate. Sixteen completed master's degrees and 12 were in the process.

In terms of strengths, I would like to tell you about some of the things the BLS program has done: (1) The flexibility of the material. (2) The grading system of S, U, or Needs Improvement. This system of grading helped lower my anxiety level; I was worried that my children would bring home higher grades than I did. (3) The newsletter which was published monthly at the University of Oklahoma helped keep the students informed on the BLS program and it also offered questions that would be similar to the questions in the area comprehensive exam. It helped bolster our image knowing that we could move up from doing maybe 15% of the questions, to 45% and finally to 100%. (4) The campus area seminars were very well planned; the seminars were reinforcing to the student. In terms of completion time, some students completed the whole four year program in less than two years, and others took six or seven years.

In terms of suggestions for improvement: I think that the biggest problem facing the BLS student is that there is no formal introduction to the program. Also a pericdic evaluation of objectives is needed; there should be greater availability of the adviser with no stigma attached to reviewing and questioning objectives. Adults in the BLS program needed some instruction as to how to study; a manual such as Stevens and Evans Psychology of Education would have been helpful. Finally, more in depth comments on the returned papers would have been appreciated; adult learners look for comments; they are always looking for new ways to improve.

DISCUSSION

Q. Was there any concern expressed by these students for validating their prior experiential learning? Or an opportunity to integrate field experience with classroom activity?

A. The most formal recognition was that many of the students contributed to teaching the course. This is a fantastic way of handling this problem. There was nothing formal to validate their experiences.

Q. Much has been stated about the concern of non-traditional students' anxiety of failure. I'm curious to see if in your experience do you know of any student who took a course and still failed?

A. There is a great deal of similarity between a BLS degree and a PH.D. degree in that there is a great deal of motivation and a great deal of effort. As I am getting more and more closer to my terminal degree, I'm beginning to realize that stamina is as important as competence.

Q. As a graduate student at Ohio State how were you received by graduate students who went through a traditional process? Could you compare yourself to them? How did you feel about it?

A. Strangely enough, I felt very comfortable. I had no difficulty at all, in fact I found that many of the traditional students looked up to me. I had been out in the world, I worked for five years. With the exception of one person, all the graduate students in my area had gone four years to an undergraduate program and then started on a graduate program. None of them had any other experience other than those educational programs. In terms of my own feelings of competency, I felt competent because most of the other students had a fairly narrow base, either psychology majors or education majors, and I had a fantastic education and it's a good feeling to know a little bit about a lot of things.

Q. Could you give us some examples of the topics that were used in the mini thesis?

A. My first area seminar was on the social sciences and the theme was "Man and the Megalopolis." I did a paper on malnutrition in the megalopolis which was an earth shattering experience to learn that so many people were malnourished in our cities. My second theme in the humanities dealt with the Enlightened Era. And a very strange thing happened. All my life I thought that English literature was nothing but a bore, but one of the professors of English literature turned me on to it so much that I couldn't stay away from it.

The third area was in the natural sciences and we studied world soils and their impact on people. Then in the inner-area we dealt with man in the 20th century; I dealt with changing marriage patterns.